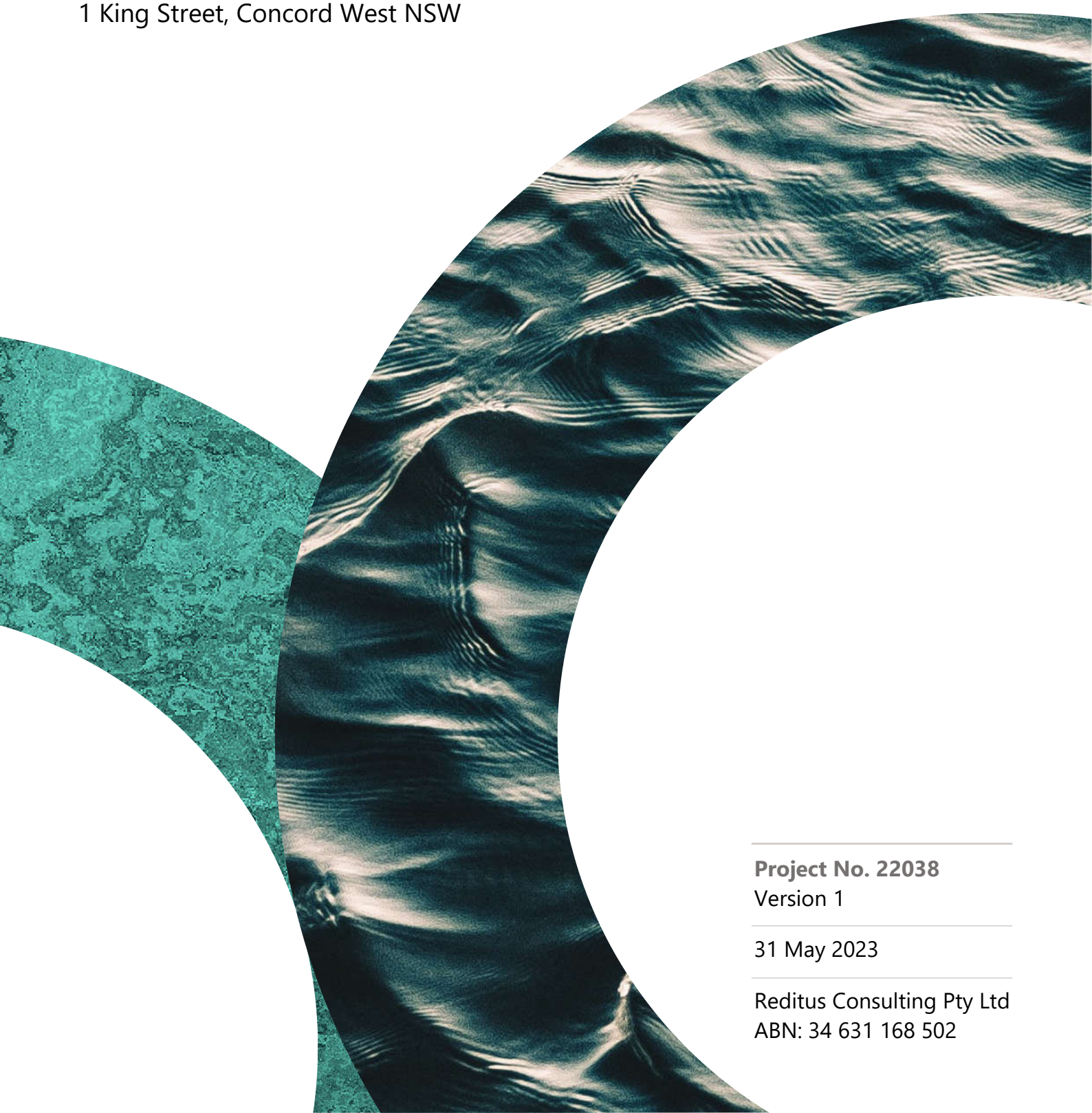
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Detailed Site Investigation

1 King Street, Concord West NSW



Project No. 22038
Version 1

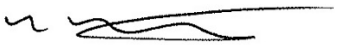
31 May 2023

Reditus Consulting Pty Ltd
ABN: 34 631 168 502

Detailed Site Investigation

1 King Steet, Concord West NSW

DOCUMENT CONTROL

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This report has been prepared for Billbergia Pty Ltd in accordance with the terms and conditions of appointment for proposal P22038_DSIv2 dated 9 November 2022. Reditus Consulting Pty Ltd (ABN 34 631 168 502) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

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Abbreviations

TERM	DEFINITION
° C	Degrees Celsius
ACM	Asbestos Containing Material
AEC	Area of Environmental Concern
AF/FA	Asbestos Fines / Fibrous Asbestos
AFFF	Aqueous Film Forming Foam
AHD	Australian Height Datum
ASC	Assessment of Site Contamination
BGL	Below Ground Level
BTEX	Benzene Toluene Ethylbenzene Xylene
BTOC	Below Top of Casing
C&D	Construction and Demolition
CEC	Cation Exchange Capacity
COC	Chain of Custody
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DO	Dissolved Oxygen
DQO	Data Quality Objective
EI	Environmental Investigation
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
ESG	Environmental Services Group
ESL	Ecological Screening Level
GDE	Groundwater Dependant Ecosystem
HIL	Health Investigation Level
HSL	Health Screening Level
IBC	Intermediate Bulk Container
LGA	Local Government Area
LIR	Land Insight and Resources
LOR	Limit-Of-Reporting
ML	Management Limits
NATA	National Association of Testing Authorities

TERM	DEFINITION
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure (2013)
NPI	National Pollutant Inventory
NSW	New South Wales
PAH	Polycyclic Aromatic Hydrocarbons
OC	Organic Carbon
OCP	Organochloride Pesticides
OPP	Organophosphorus Pesticides
PACM	Potentially Asbestos Containing Material
PCB	Polychlorinated Biphenyls
PD NSW	Property Development New South Wales
PFAS	Per- and polyfluoroalkyl Substances
PID	Photoionisation Detector
PPM	Parts Per Million
PQL	Practical Quantification Limit
QA/QC	Quality Assurance / Quality Control
RAP	Remedial Action Plan
RPD	Relative Percentage Difference
SAC	Soil Assessment Criteria
SD	Standard Deviation
SDS	Safety Data Sheet
SWL	Standing Water Level
TOC	Top-of-Casing
TPH	Total Petroleum hydrocarbons
TRH	Total Recoverable Hydrocarbons
UPSS	Underground Petroleum Storage Systems
USCS	Unified Soil Classification System
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Executive Summary

Reditus Consulting Pty Ltd (Reditus) was engaged by Billbergia Pty Ltd (the client) to undertake a Detailed Site Investigation (DSI) to support an intended development application (DA) for a proposed mixed-use commercial/residential development at 1 King Street, Concord West NSW (the site). The location and layout of the site is presented in **Figure 1**, **Appendix A**.

The site is identified as Lot 101 in Deposited Plan (DP) 791908, covering an area of approximately 3.136 hectares (ha). The site currently comprises a large commercial centre over the majority of the site, with the addition of a childcare centre located in the northern portion of the site and multistorey carparking in the southern portion. It is understood the current site infrastructure is proposed to be demolished prior to the new development consisting of the construction of 10 buildings ranging from 4 to 14/20 storeys. It is assumed that 2-3 basement parking levels will also be included which will extend to approximately 9 m depth below existing ground surface levels.

The overarching objective of this DSI was to evaluate the possibility for contamination to be present at the site due to current or former land use activities. If any contamination was present the magnitude, distribution, and extent of contaminants of potential concern (COPC) were assessed to enable a determination of the suitability of the site for the proposed redevelopment.

Based on a review of the site history, observations made during fieldwork, results of laboratory analysis and the proposed land use scenario, Reditus concludes the following:

- Exceedances of health and ecological criteria were reported from the results of the current and previous investigations and are inferred to have resulted from previous industrial land usage and bulk underground fuel storage onsite.
- The majority of soil exceedances of the previous ASA investigations were reported in the southern and southeast boundary of the site.
- Exceedances of soil criteria found within this investigation were located primarily in the central areas of the site as well as the south-eastern boundary.
- Remedial works performed between 1994 and 1996 were limited to the proper removal and validation of underground storage tank (UST) infrastructure and tank pits onsite.
- As a result of the construction of on grade multistorey carparking onsite and cutting of topography to create the asphalt carpark on the southern and south-eastern boundary of the site, contaminant load has been removed or reduced in these localities.
- The footprint of the building from a chemical perspective is inferred to be unaltered from what was classified by the ASA 1995 study and the selective boreholes performed by Reditus.
- Results of hazardous ground gas investigation however produced a CS score of 3.59 placing the site in the moderate to high-risk category. Due to these findings a management plan is warranted in the context of the proposed development.
- Potential acid sulfate soils have been identified on site and the formulation of an acid sulfate soils management plan is warranted.
- It is concluded that the site can be made suitable for the proposed development, however further testing and remedial works will be required to facilitate the proposed development. Including the removal of existing UST infrastructure.

Based on the findings of the investigation, Reditus recommends the following to make the site suitable in the context of the proposed development.

- Additional testing is warranted for the site at the time demolition of existing structures is performed and greater access to the central areas of the site is gained. This will provide great confidence from a chemical perspective of soils in the central areas of the site and confirm investigative works by ASA. Such investigation may also include

further monitoring well locations (gas/groundwater), to confirm the absence of a vapour risk from previous land usage (i.e. TCE baths) and further characterise hazardous ground gas conditions onsite.

- A remedial action plan will be warranted for the removal of UST infrastructure identified onsite and areas of fill in exceedance of land use criteria that will remain onsite. This will be performed after a review of the finalised design for the site is performed.
- A management plan will be required for the site based on the results of the hazardous ground gas assessment.
- A management plan will be required for the site due the presence of potential acid sulfate soils.
- A pre-demolition hazardous building material survey (HAZMAT) is recommended for the site prior to the demolition of onsite infrastructure given the age of onsite infrastructure.

1 Introduction

Reditus Consulting Pty Ltd (Reditus) was engaged by Billbergia Pty Ltd (the client) to undertake a Detailed Site Investigation (DSI) to support an intended development application (DA) for a proposed mixed-use commercial/residential development at 1 King Street, Concord West NSW (the site). The location and layout of the site is presented in **Figure 1**, **Appendix A**.

The site is identified as Lot 101 in Deposited Plan (DP) 791908, covering an area of approximately 3.136 hectares (ha). The site currently comprises a large commercial centre over the majority of the site, with the addition of a childcare centre located in the northern portion of the site and multistorey carparking in the southern portion. It is understood the current site infrastructure is proposed to be demolished prior to the new development consisting of the construction of 10 buildings ranging from 4 to 14/20 storeys. It is assumed that 2-3 basement parking levels will also be include which will extend to approximately 9 m depth below existing ground surface levels.

A Preliminary Site Investigation (PSI) was already completed for the site by Reditus, dated 18 October 2022. Findings and recommendations of the PSI included the following:

- Completion of a DSI to properly characterise the nature and extent of potential contamination of soil, groundwater, and soil gas at the site.
- The DSI should include a review of the Remediation Management Plan (if available).
- Due to the presence of UPSS infrastructure any remedial strategy for the site will be required to address the proper and safe removal and disposal of such infrastructure adhering to the relevant guidelines and legislation.
- A Destructive Hazardous Materials Assessment should be undertaken prior to the demolition of any above ground structures at the site.
- An Acid Sulfate Soil Assessment should be undertaken, noting that the Planning Certificate (Section 10.7) for the land identified that the site is affected by a policy adopted by council that restricts the development of land because of the likelihood of acid sulfate soils.

To support the intended DA in accordance with State Environmental Planning Policy (Resilience and Hazards) 2021 requirements and address the findings of the PSI already completed for the site this DSI was completed. The DSI includes assessment to define the nature, extent, and degree of contamination (if any); to assess potential risk posed by contaminants to health and the environment (if any); and to obtain sufficient information to assess environmental risk and inform recommendations to render the site suitable (if required) for the proposed redevelopment.

Reditus notes that this report, including its conclusions and recommendations, must be read in conjunction with the Statement of Limitations provided in **Section 14.**

1.1 Objectives

The overarching objective of this DSI was to evaluate the possibility for contamination to be present at the site due to current or former land use activities. If any contamination was present the magnitude, distribution, and extent of contaminants of potential concern (COPC) were assessed to enable a determination of the suitability of the site for the proposed redevelopment. The specific objectives of the DSI were to:

- Evaluate the possibility for contamination to be present at the site as a result of current and former land use activities.
- Assess whether Contaminants of Potential Concern (COPC) (if detected above site assessment criteria) present an unacceptable risk of exposure to human health and/or the environment, in the context of the proposed redevelopment.
- Provide advice on whether the land is suitable or could be made suitable (from a contamination perspective) for the proposed land use.
- Provide recommendations for further investigation, management, or remediation (if required).

- Conform to the requirements of the National Environmental Protection Council (Assessment of Site Contamination) National Environment Protection Measure 1999 (as amended in 2013) ('ASC NEPM, 2013') and the NSW Environmental Protection Authority (NSW EPA 2020) Contaminated Land Guideline for *Consultants Reporting on Contaminated Land*.

1.2 Scope of Works

To achieve the objectives outlined above, Reditus completed the following:

- A review of the environmental setting with regards to geology, topography, hydrology and hydrogeology.
- Review of previous environmental investigations completed at the site.
- Completion 47 boreholes, with a systematic and targeted approach across the site to a target depth of 3 metres below ground level (mbgl) or 0.5 mbgl into natural materials.
- Each soil sample location was logged in general accordance with the Unified Soil Classification System (USCS) and screened in the field using a Photo-ionisation Detector (PID) to detect the potential presence of volatile organic compounds (VOCs).
- Two or more soil samples were nominally collected from each borehole location across the site, nominally of the near surface materials (typically fill materials) and representative soil samples from the underlying natural material. Selected samples were submitted for analysis for the following contaminants of potential concern (COPCs):
- **Shallow/fill:**
  - Total recoverable hydrocarbons (TRH).
  - Benzene, toluene, ethylbenzene, xylenes (BTEX).
  - Polycyclic aromatic hydrocarbons (PAH).
  - Eight priority metals (including arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc).
  - Organochlorine pesticides (OCP) and organophosphate pesticides (OPP).
  - Polychlorinated biphenyls (PCB).
  - Asbestos identification (ID) in soil – selected samples.
  - Per- and poly-fluoroalkyl substances (PFAS).
  - Volatile organic compounds (VOCs).
- **Deeper soils:**
  - TRH.
  - BTEX.
  - PAHs.
  - Heavy Metals.
  - Acid Sulfate Soil Assessment (targeting the interface above and below groundwater).
- Soil results were compared against the NEPC (2013) NEPM Health Investigation Level (HIL), Health Screening Level (HSL), Ecological Investigation Level (EIL), Ecological Screening Level (ESL) and Management Limits (ML) guidelines, as well as the CRC Care (2011) Direct Contact HSLs.
- Eight (8) selected boreholes were converted into dual purpose groundwater and gas monitoring wells with two rounds of landfill gas monitoring completed using a GFM430 or GA5000 landfill gas meter to screen for bulk landfill gases.
- Groundwater sampling was performed at the eight (8) newly installed monitoring wells, in addition to three (3) existing groundwater wells onsite and assessed for the following COPCs
  - TRH.
  - BTEX.
  - PAHs.

  - Eight priority metals.
  - VOCs.
  - OCPs/OPPs (selected wells).
  - PCBs (selected wells).
  - Phenols (selected wells).
  - Cyanide (selected wells).
  - PFAS (selected wells).
- Groundwater results were compared against NEPC (2013) NEPM Health Screening Levels (HSLs), ANZG (2018), Australian Recreational Water Guidelines (2011) and PFAS NEMP v2.0 (2020).
- Soil vapour sampling at two locations (MW01, MW08) using summa cannisters to assess for potential VOCs and TRH soil vapour migration at the site.
- Preparation of this DSI report in general accordance with the NEPC (2013) NEPM, NSW EPA (2020), SEPP Resilience and Hazards (2021) and other relevant NSW EPA reporting guidelines. The report provides a clear statement of the site suitability for the proposed development and provides recommendations for additional works to render the site suitable (if any). This report was authorised by a EIANZ certified suitably qualified environmental practitioner, Site Contamination Specialist (CEnvP-SC) accredited Principal of Reditus.

2 Site Identification

The site identification details have been prepared in general accordance with the NSW EPA (2020) Consultants Reporting on Contaminated Land and the ASC NEPM (2013) Field Checklist for 'site Information'. The site identification information is summarised in **Table 1** below.

Table 1. Site Identification

ITEM	DETAIL
Address	1 King Street, Concord West NSW 2138
Title and Land Information	Lot 101 DP791908
Site Area	Approximately 3.136 hectares (ha)
Local Government Area	City of Canada Bay Council
Site Coordinates to the approximate centre of the Site (GDA2020 MGA Zone 56)	Easting: 322818.785 Northing: 6252846.682
Zoning	The site is zoned IN1 – General Industrial, as specified in the Canada Bay Local Environmental Plan 2013
Current Owner	Concord West Property Pty Limited
Current Land Use	Westpac service centre and childcare centre
Future Land Use	Proposed mixed-use commercial/residential development with basement parking
Trigger for Assessment	To inform the intended development application (DA) for the site
Surrounding Land Uses	The land uses currently surrounding the site include: • **North**: Low-density residential. • **South**: Electrical substation and Low, and High-density residential. • **East**: Railway corridor/station and then low-density residential. • **West**: Industrial/commercial and then parkland.
Site Layout	**Figure 2**, **Appendix A**

2.1 Site Condition

A site visit was conducted by Reditus' Principal Environmental Scientist Dean Stafford on 24 February 2022. The following site description was recorded during the site visit:

- The site has an irregular boundary and slopes broadly in a westerly direction towards the nearby Powells Creek.
- The site is currently occupied by mixed land usage with a commercial centre over a majority of the site in addition to a small childcare centre on site.
- The site is primarily covered in hard stand with extensive outdoor and multistorey parking surrounding the commercial infrastructure on site.
- Vegetated areas are restricted to the fringe of the property and garden beds within the outdoor car parks.
- A tennis court is located adjacent to the childcare on the north side of the site.
- An electrical substation was noted during the site walkover on the property immediately south of the site.
- A Telstra cell phone tower was observed on the southeast corner of the site.
- A backup generator was also noted on the basement level of the Westpac Service Centre.
- Cut and fill was observed along the eastern edge of the site adjacent to the railway line.
- Underground Storage Tanks (UST) fill points were observed in the open air carpark at the eastern side of the site.

Relevant photographs from the site inspection are provided in **Appendix B**.

3 Site Setting and Surrounding Environment

A summary of the site setting surrounding environment obtained from a Land Insight and Resources (LIR) report acquired for the site (LI-02434 ESR, dated 22 February 2022) is provided in **Table 2** below. The LIR report is provided in the PSI completed by Reditus (October, 2022).

Table 2. Site Setting and Surrounding Environment

ITEM	DETAIL
Topography	The site has an elevation between 4-10 m Australian Height Datum (AHD) sloping downward in a westerly direction.
Hydrology	Surface water is likely to flow into the local stormwater network and discharge to Powells Creek, located approximately 330 m west of site.
Regional Geology and Soils	The 1:100,000 Wollongong Port Hacking Geological Map indicated the site is underlain by middle Triassic aged Ashfield Shale of the Wianamatta Group. Ashfield Shale is described as black to light grey shale and laminite.
Acid Sulfate Soils (ASS)	A review of the City of Canada Bay Local Environmental Plan 2013 acid sulfate soil risk map indicates that the site is located within a class 5 zone. A class 5 zone limits the drawdown of the water table below 1 mAHD on surrounding sites (500m radius) if the adjacent land is characterised as classes 1-4 on the acid sulfate soil risk map. Land adjacent to the site in a westerly direction is classified as class 2 on the ASS risk map. As such, further investigation will likely be required into the potential for acid sulfate soils (PASS) to be present or impacted by the proposed redevelopment, given basement parking is to be included. A total of eight (15) soil samples were collected from seven (7) locations across the site and analysed for chromium reducible sulfur. Samples at BH05_3.0 and BH31_4.0 exceeded the adopted guidelines, therefore acid sulfate soils are present on site and will be discuss further in **Section 10.4.**
Registered Groundwater Bore Search	A review of Bureau of Meteorology's Australian Groundwater Explorer indicated that there are (44) registered bores within a 2 km radius of the site. 41 bores were installed for monitoring purposes one (1) bore was installed for "household purposes", one (1) for irrigation purposes and one (1) unknown. The monitoring bores reported varying depths of shale and standing water level between 1.3-3.1 metres below ground level (mbgl). The closest bore (GW114861) is located 171.6 m west of the site and reported a standing water level of 1.9 mbgl.
Regional Hydrogeology	A review of Hydrogeology map of Australia (Geoscience Australia) indicates the aquifer type beneath the site are porous, extensive with low-moderate productivity.
Inferred Groundwater Flow Direction	Groundwater contours produced as part of this investigation determined groundwater underlying the site flows in generally in a westerly, moving towards Powells Creek. The groundwater contours and inferred groundwater flow direction are presented on **Figure 4, Appendix A**

ITEM	DETAIL
Depth to Water Table	The groundwater standing levels recorded onsite during this investigation ranged from 0.49 (MW06) to 5.10 (MW08) metres below top of casing (mbTOC). The closest registered groundwater bore (GW114861) is located 171.6 m west of the site and reported a standing water level of 1.9 mbgl.
Yield and Inferred Groundwater Quality	WaterNSW data from the (41) monitoring bores within a 2 km radius of the site reported yield for five (5) bores, with a range of 0.01 and 0.2 L/s. The one (1) irrigation bore within a 2km radius of the site reported a yield of 3.0 L/s.
Groundwater Dependant Ecosystems	One (1) registered groundwater well used for irrigation purposes was reported within a 2 km radius of the site. The Groundwater Dependant Ecosystem Atlas reports that terrestrial ecosystems to the west of the site are located with an area of 'high potential for GW interaction'.
Groundwater Embargoes	No groundwater embargoes apply to the site.
Sensitive Environments	The nearest identified sensitive environments are summarised as follows: • Local stormwater network. • Powells Creek. • Surrounding low-density residential properties.

4 Previous Investigations

Reditus are aware of the following previous contamination investigations/reports pertaining to the site:

- Reditus Consulting (Reditus) (October 2022) Preliminary Site Investigation, 1 King Street, Concord West NSW.
- Australian Site Assessment (ASA) (September 1996) Telstra Corporation Limited, 1 King Street, Concord West, Contaminated Site Remediation, Remediation Management Plan.
- GHD Melbourne (September 1996) Review of Remediation Management Plan for Telstra Corporation Limited, Concord West Engineering Workshop.
- Australian Site Assessment (ASA) (March 1995) Telstra Corporation Limited, Underground Tank Removal, Concord West Engineering Workshop.
- Australian Site Assessment (ASA) (January 1995) Telstra Corporation Limited, Site Assessment of Concord West Engineering Workshop.
- D.J. Douglas & Partners (DP) (February 1994) Preliminary Contamination Assessment, Former Telecom Facility, 1 King Street, Concord West.

The reports and findings are summarised in **Table 3** below. Laboratory results of the ASA (January 1995) will be utilised to provided further characterisation of the site.

Table 3. Summary of Previous Investigations

ITEM	DETAIL
Reditus (2022) PSI	
Document Information	Preliminary Site Investigation 1 King Street, Concord West NSW Version 1, dated 18 October 2022
Prepared By	Prepared by: Reditus Consulting Pty Ltd Prepared for: Billbergia Pty Ltd
Purpose	To provide advice on the site's suitability for the proposed mixed-use development from a contamination perspective
Scope of Works	• Review of site history and environmental setting information. • Site walkover and inspection.
Findings	• Review of historical aerial photographs identified that the site appears to have been used primarily for industrial/commercial use since at least 1943. • Between 1951 and 1955 the main warehouse/commercial building in the central and northern portion of the site was extended into the southern portion of the site. • Between 1994 and 1998 the existing site buildings appears to have been either renovated or demolished and the current site buildings constructed. • The site appears to have remained relatively unchanged since the 1998 aerial photograph to present day. • The results of the historical title deed search detail from 1915 to 1972 the site was owned by Massey-Harris Company Limited then H.V. McKay Massey Harris Proprietary Limited (now Massey-Ferguson (Australia) Limited). This suggests the site could have been used for the manufacturing of agricultural machinery at this time.

ITEM	DETAIL
	• The NSW EPA Register of Contaminated Sites identified the Bicentennial Park Landfill located approximately 265m west of the site. • A search of the NSW EPA Public Registers identified a surrendered licence for Westinghouse Brakes Australia Pty Ltd for "Hazardous Industrial or Group A Waste Generation or Storage" at the site. • The results of the SafeWork NSW Dangerous Goods Records search indicated there are two diesel tanks (10,000L and 55,000L) present onsite located within the eastern carparking area. • The Section 10.7 Planning Certificate for the site identified the land is affected by a policy adopted by council that restricts the development of land because of the likelihood of acid sulfate soils. The land has been identified as being within Class 5 zone on the Acid Sulfate Soil Map under the Canada Bay LEP 2013. A class 5 zone limits the drawdown of the water table below 1 mAHD on surrounding sites (500m radius) if the adjacent land is characterised as classes 1-4 on ASS maps. • The Section 10.7 Planning Certificate for the site identified the council has a copy of the Remediation Management Plan for 1 King Street Concord West, prepared by Australian Site Assessment, dated September 1996.
Conclusions and Recommendations	Moderate risk of contamination to be present at the site, in particular due to the presence underground petroleum storage tanks identified onsite. The following recommendations were made: • Completion of a Detailed Site Investigation (DSI) to properly characterise the nature and extent of potential contamination of soil, groundwater, and soil gas at the site. • The DSI should include a review of the Remediation Management Plan (if available). • Due to the presence of UPSS infrastructure any remedial strategy for the site will be required to address the proper and safe removal and disposal of such infrastructure adhering to the relevant guidelines and legislation. • A Destructive Hazardous Materials Assessment should be undertaken prior to the demolition of any above ground structures at the site. • An Acid Sulfate Soil Assessment is undertaken. It is noted that the Planning Certificate (section 10.7) for the land identified that the site is affected by a policy adopted by council that restricts the development of land because of the likelihood of acid sulfate soils.
ASA (1996) RMP	
Document Information	Remediation Management Plan 1 King Street, Concord West, Contaminated Site Remediation Dated September 1996
Prepared By	Prepared by: Australian Site Assessment Prepared for: Telstra Corporation Limited
Purpose	Provide a Remediation Management Plan to remediate the property situated at 1 King Street, Concord West to a state whereby the land will be suitable for the proposed rezoning to a residential status.
Scope of Works	Preparation of a RMP based on the findings of the previous assessments and investigations completed at the site.

ITEM	DETAIL
Findings	The extent of soil contamination at the site consists of mainly elevated concentrations of heavy metals, with incidents of elevated concentrations of PAHs, DDE, DDT, DDD, dieldrin, diazinon and asbestos detected in "hot spot" areas. Marginal to high levels of heavy metal contamination considered to exist across the entire property, with the areas of contamination divided into five broad areas, as follows: • The eastern fence line (railway) • The southern fence line • The main workshop building • Surrounding the administration building (northern portion of site) • The western carpark
Remediation Plan	Key details included in the Remediation Plan for the site is as follows: • All chemical containers and other storage facilities including the pumping out and removal of the "wastewater dosing tank and concentrated caustic solution storage tanks" are to be removed from the site. • Removal of asbestos roofing, asbestos cladding, internal asbestos walls, insulation, pipes and asbestos waste located in the basement of the main building. • Demolition of the office and administration building, flammable liquids store, oil store, pine board store, concrete slabs, pits, footings, kerbs, bitumen, underground fuel storage tanks, hoist etc. • There are possibly three (3) unidentified underground fuel storage tanks on site. Their approximate location believed to be near the Flammable Liquids Store (eastern portion of the site). Tanks to be removed and disposed of. • Excavation of contaminated soil at the site to ensure the removal of heavy metals, PAHs, DDE, DDT, DDD, dieldrin, diazinon and asbestos contamination. • At the completion of the remediation earthworks for the site a validation reported will be prepared by ASA and reviewed by an EPA accredited auditor. • The site is intended for medium to high density residential development subsequent to remediation, validation, and rezoning approvals. • The site will be reinstated to a state suitable for residential dwellings and light commercial dwellings.
GHD Melbourne (1996) Review of RMP	
Document Information	Review of Remediation Management Plan for Telstra Corporation Limited, Concord West Engineering Workshop 9 September 1996
Prepared By	Prepared by: Richard Wolfe – Environmental (Contaminated Sites) Auditor Prepared for: Telstra Corporation Limited
Purpose	Assess the ASA proposals for remediation of 1 King Street, Concord West
Scope of Works	Review of ASA's draft RMP, along with other reports/investigations completed at the site
Conclusions and Recommendations	The RMP considered to generally address the requirements to remediate the site to a standard appropriate for residential development, noting that additional data should be provided for the following: • Depth of contamination

ITEM	DETAIL
	• Nature and extent of PAH, TPH, and OC/OPs in soils • QA/QC analysis • Mobility of soil contaminants Recommended that ASA prepare a validation program to address the above and submit the plan before remediation commences.
ASA (1995) Underground Tank Removal	
Document Information	Underground storage tank removal summary report.
Prepared By	Prepared by: Australian Site Assessment Prepared for: Telstra Corporation Limited
Purpose	Detailing the removal of underground storage tank and the associated remedial efforts including validation sampling.
Scope of Works	UST removal, contaminated soil removal and validation sampling.
Findings	Four USTs a triple inceptor trap (TIT) and grease interceptor trap (GIT) were removed from the site. Asbestos containing soils were removed from the site found adjacent to the grease interceptor trap.
Conclusions and Recommendations	The infrastructure was successfully removed, and results of validation sampling was below the relevant criteria for the site including TRH/BTEX and lead results.
ASA (1995) Site Assessment	
Document Information	Phase 1 and Phase 2 Assessment of 1 King St, Concord West.
Prepared By	Prepared by – Nicholas Zigouras Prepared for – Telstra Corporation Limited
Purpose	Site characterisation and assessment of site suitability for high density residential development.
Scope of Works	Preliminary desktop and site walkover followed by extensive soil investigation of the site.
Findings	• Site inspection noted the following areas of potential concern: – USTs – Areas of fill material of unknown origin – Electrical substation – Area surrounding and beneath the Flammable Material store – Treatment pits beneath the main building – Oil store and surrounding areas – Petrol bowser – Areas that showed visible signs of oil or other chemical spills • Site occupied by Telecom since 1978. Site history identified the following operating practices carried out by Telecom within the main factory building:

ITEM	DETAIL
	– **Machine Shop**: production of plastic products – **Carpenters/Upholsters Shop**: Sawing timber and upholstering for office furniture – **Paint Shop**: Spray painting and powder coating – **Metal Finishing**: Caustic bath, hydrochloric acid bath, phosphating line and water sprays. In this area a trichloroethane vapour degreasing bath was located, used for cleaning metal equipment. – **Effluent Treatment Plant**: Large mixing and neutralising tank and two associated raw caustic material feed tanks. – **Shot Blasting**: Abrasive steel blasting used to clean metal objects, fully enclosed. – **Welding**: Welding bays in northern half of the building – Other activities also occurred at the site including preparation of circuit boards, vehicle maintenance, sign writing, and other painting activities. • Chemical storage/inventory included the following: – Cyndan WTC 4000 – cooling tower treatment – Cyndan Flocculant – water treatment – Cyndan Refusal – contains chlorobenzene – ICI Dulux – paint thinner – Reohaze Special Risks – contains potassium hydroxide and aliphatic ether – Norege Decoate – strong bleach – Croda 302B Multitech – hardner – Ethyl methyl ketone – Hydrochloric acid with organic acid and a non-ionic surfactant – Hydrocarbons with a minor amount of diallyl phthalate – Cleaner – solid anionic detergent – Sodium hydroxide – Paint – Redic Ind Durotread – water based high-build coating. • Asbestos reportedly stored or dumped in the basement of the main Engineering Workshop Building. • 88 borehole locations and 257 soil samples collected. • Analytical testing included the following: – Heavy metals, asbestos, phenols, formaldehyde, OCP/OPPs, PCBs, PAHs, VOCs & SVOCs.
Conclusions and Recommendations	Findings of the assessment were consistent with the summary provided in the above ASA RMP (1996) which found several areas of contamination across the site.
DP (1994) Preliminary Contamination Assessment	
Document Information	Targeted and grid-based soil sampling for site characterisation of 1 King St, Concord West
Prepared By	Prepared by Douglas Partners Prepared for Clough Engineering Ltd

ITEM	DETAIL
Purpose	To determine if the current land use on site has led to contamination in soil and groundwater.
Scope of Works	• 47 boreholes completed across the site and 127 soil samples collected – 73 analysed. • Samples collected at nominal depths of 0.5, 1.0 and 2.0 m. Boreholes in the vicinity of USTs extended to 5.0 m.
Findings	• Groundwater was encountered at depths between 3.5 and 5.5 m during previous drilling works carried out at the site. • Analytical results indicated localised areas of heavy metal and TRH contamination at the site. • TRH impacts in soil samples in the vicinity of the UST in the northwest corner of the site. • No detectable concentrations of asbestos fibres in samples collected/tested. • No significant concentrations of OCPs or herbicides were identified. • Low pH detected in soil in the vicinity of the wastewater treatment tank, caustic solution storage tanks, and delivery pipes.
Conclusions and Recommendations	• Conclusions of the report were that localised contamination of metals and TRH are present onsite however risk with the current industrial land use was low. However, a prospective residential development would require more extensive environmental assessment

5 Preliminary Conceptual Site Model

Based on the findings of the Reditus' (2022) PSI report, a preliminary Conceptual Site Model (CSM) has been prepared for the site. The ASC NEPM 2013 defines a CSM as:

> *"A representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors"*

The essential elements of the CSM, as required by the ASC NEPM (NEPC, 2013), include an understanding of:

- Known and potential sources of contamination and contaminants of concern including the mechanism(s) of contamination (e.g., 'top down' spill or sub-surface release from corroded tank or pipe).
- Potentially affected media (soil, sediment, groundwater, surface water, indoor and ambient air) and human and ecological receptors.
- Potential and complete exposure pathways.

A tabular CSM provided in **Table 4** identifies the complete and potential pathways between the known or potential source(s) of contamination and receptor(s).

5.1 Potential Sources of Contamination

The potential sources of contamination identified at the site are summarised in **Table 4**.

Table 4. Potential Sources of Contamination

SOURCE	LOCATION	ASSOCIATED CHEMICALS	CONTAMINANTS OF POTENTIAL CONCERN
Bulk underground fuel storage	Onsite	Potential spills and leaks from in-situ Underground Petroleum Storage Systems (UPSS) identified at the site.	TRH, BTEX, PAH, metals (lead).
Historical use of fill	Onsite	Importation of fill from an unknown source used for site infilling/levelling.	Metals, TRH, BTEX, PAH, OCP/OPP, PCBs, asbestos.
Historical industrial land use	Onsite/Offsite	Spills, leaks, and deposition of contamination from historical industrial land uses (including manufacturing) both on and surrounding the site.	Metals, TRH, BTEX, PAH, PCBs, phenols, PFAS.
Hazardous Building Materials	Onsite	Improper demolition of previous structures onsite or weathering of potential existing hazardous building fabrics.	Asbestos in building materials, lead paint.
Electrical substation and transformer	Onsite/Offsite	Leakage of PCBs containing insulating fluid.	PCBs.

5.2 Potentially Affected Media

The potentially affected media at the site includes:

- Soil.
- Groundwater.
- Soil gas.

5.3 Potential Receptors and Pathways

5.3.1 PROPOSED LAND USE SCENARIO AND POTENTIAL RECEPTORS

Based on the proposed mixed-use commercial/residential development potential receptors of contamination include the following:

- Future site occupants and site users.
- Construction/maintenance workers.
- Powells Creek and the Parramatta River.

5.3.2 HUMAN HEALTH – DIRECTION CONTACT PATHWAY

It is considered appropriate to assess whether a direct contact source may be present onsite for future site occupants/site users and construction and maintenance workers. Direct contact pathway health impacts should be taken into consideration where there are likely accessible soils.

5.3.3 HUMAN HEALTH – INHALATION / VAPOUR INTRUSION PATHWAY

It is considered necessary to assess whether a vapour source may be present onsite for future site occupants/site users and construction and maintenance workers given the presence of UPSS identified and reported historical use of TCE baths and the proposed development to include basement parking.

5.3.4 AESTHETICS

No visual evidence of widespread or significant staining was observed at the site at the time of inspection however an assessment of aesthetics can be made during assessment of other pathways.

5.3.5 ECOLOGICAL – TERRESTRIAL ECOSYSTEMS

The NEPC (2013) NEPM requires a pragmatic risk-based approach should be taken in applying ecological investigation and screening levels in residential and commercial/industrial land use settings.

The EIL and ESL guidelines are considered by Reditus to only be applicable where there are likely accessible soils, such as garden beds and landscaped areas.

Given the proposed development includes landscaped areas with accessible soils, it is considered that further assessment (NEPC (2013) NEPM EILs/ESL) of unacceptable risk to terrestrial ecosystems is warranted.

5.3.6 GROUNDWATER

Assessment of groundwater is considered warranted due to the presence of on and offsite sources of potential groundwater contamination, particularly onsite UPSS infrastructure and onsite historical sources of solvents, including TCE.

5.4 Potential Transport Mechanisms and Exposure Pathways

Potential transport mechanisms of contamination relevant to the site include:

- Spills and leaks from UPSS infrastructure identified at the site.
- Potential historical placement of fill materials.
- Spills, leaks, and deposition of contamination from historical industrial land use both on and surrounding the site.
- Improper demolition of previous structures onsite or weathering of potential existing hazardous building fabrics.
- Leakage of PCBs containing insulating fluid on and adjacent the site.

Potential exposure pathways and receptors relevant to the site may include:

- Direct contact with contaminated soils at the surface or subsurface by current or future site occupants/site users and construction and maintenance workers.
- Inhalation of hazardous ground gas by current or future site occupants/site users and construction and maintenance worker.

- Direct contact, ingestion, or inhalation of disturbed soil as dust by site users or offsite receptors.
- Surface water run-off discharging sediment to Powells Creek via the local stormwater network.

5.5 Source, Pathway and Receptor Linkages

A preliminary tabular CSM has been prepared for the site based on the outcomes of the Reditus (2022) PSI. The tabular CSM describes potential linkages and assesses each of the linkages as probably, possible, or unlikely based on the likelihood of occurrence and availability of data.

Table 5. Preliminary Tabular Conceptual Site Model

SOURCE	EXPOSURE PATHWAY	RECEPTOR	EXPOSURE
Bulk underground fuel storage *Potential spills and leaks from UPSS*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off. • Extraction/discharge of potentially contaminated groundwater	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Potential source-pathway-receptor linkages have been identified and as such assessment of these linkages are warranted.
Historical use of fill *Importation of fill from unknown sources.*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off. • Extraction/discharge of potentially contaminated groundwater	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Potential source-pathway-receptor linkages have been identified and as such assessment of these linkages are warranted.
Historical industrial land use *Spills, leads, and deposition of contamination from historical land uses both on and surrounding the site*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off. • Extraction/discharge of potentially contaminated groundwater	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Potential source-pathway-receptor linkages have been identified and as such assessment of these linkages are warranted.
Hazardous Building Materials *Improper demolition of previous structures or weathering of existing hazardous building fabrics*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off.	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Potential source-pathway-receptor linkages have been identified and as such assessment of these linkages are warranted.
Electrical substation and transformer *Leakage of PCBs containing insulating fluid*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off.	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Potential source-pathway-receptor linkages have been identified and as such assessment of these linkages are warranted.

6 Data Quality Objectives

The Data Quality Objective (DQO) process is a systematic planning tool based on the scientific method for establishing criteria for data quality and for developing data collection designs. The DQO defines the experimental process required to test a hypothesis. The DQO process has been developed to ensure that efforts relating to data collection are cost effective, by eliminating unnecessary, duplicative or overly precise data whilst at the same time, ensuring the data collected is of sufficient quality and quantity to support defensible decision making.

It is recognised that the most efficient way to accomplish these goals is to establish criteria for defensible decision making before data collection begins and develop a data collection design based on these criteria. By using the DQO process to plan the investigation effort, the relevant parties can improve the effectiveness, efficiency and defensibility of a decision in a resource and cost-effective manner.

The DQO process consists of seven steps, which are designed to clarify the study objectives, define the appropriate type of data and specify tolerable levels of potential decision errors. The seven-step DQO process adopted for this DSI can be summarised as:

- **Step 1: State the Problem** – concisely describe the problem to be studied. Review prior studies and existing information to gain a sufficient understanding to define the problem.
- **Step 2: Identify the Decision** – identify what questions the study will attempt to resolve, and what actions may result.
- **Step 3: Identify the Inputs to the Decision** – identify the information that needs to be obtained and the measurements that need to be taken to resolve the decision statement.
- **Step 4: Define the Study Boundaries** – specify the time periods and spatial area to which decisions will apply. Determine when and where data should be collected.
- **Step 5: Develop a Decision Rule** – define the statistical parameter of interest, specify the action level, and integrate the previous DQO outputs into a single statement that describes the logical basis for choosing among alternative actions.
- **Step 6: Specify Tolerable Limits on Decision Errors** – define the decision maker's tolerable decision error rates based on a consideration of the consequences of making an incorrect decision; and
- **Step 7: Optimise the Design** –evaluate information from the previous steps and generate alternative data collection designs. Choose the most resource-effective design that meets all DQOs.

The DQOs are provided in **Table 6** below and were derived 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' (AS 4482.1-1997).

Table 6. Data Quality Objectives

ITEM	DETAIL
Step 1: State the problem	The site is proposed to be redeveloped for mixed use commercial and residential land usage. The historical reports and PSI identified a number of previous potentially contaminating activities that may have impacted soil and groundwater on and off site. A DSI is required to inform the development application (DA) to inform Chapter 4 Remediation of Land of SEPP (Resilience and Hazards) 2021.

ITEM	DETAIL
Step 2: Identify the decision/goal of the study	If elevated concentrations of COPCs are identified at the site: • Have potentially contaminating activities occurred on the site? If so, what level of site investigation is required to define the nature, extent and degree of contamination (if any); to assess potential risk posed by contaminants to health and the environment (if any)? • What is the extent of the impact? • Does any COPC at the site occur at concentrations that pose or may pose an unacceptable liability or risk to the environment and/or human health to persons who will utilise the future development? • If so, what is the order of priority to minimise the risk and what additional measures are required to mitigate, remediate, or manage the risk? • Is the site suitable for the proposed land use setting, in the context of land contamination?
Step 3: Identify the information inputs	Key data required to resolve the project problem included concentrations of COPC in the soil, groundwater, and soil gas, collected in the study area, and the structure and depth of the underlying site geology. The COPC selected were based on the historical assessment and the current site condition observed during fieldworks. The regulatory guidelines adopted by Reditus to assess the site are presented in **Section 7** below.
Step 4: Define the boundaries of the study	This investigation was restricted to the physical site boundaries, as shown in **Figure 2, Appendix A**. The vertical extent of the study boundaries was limited to a maximum depth of 8.0 mbgl. The temporal boundaries of the study were limited to the date that the investigations were completed.
Step 5: Develop a decision rule	If the concentrations of COPC in soil, groundwater, and soil gas are reported to be below the relevant adopted tier 1 assessment guidelines, then the site will be deemed suitable, and no management/remediation options will be proposed for the proposed land use at the site. If, however, the concentration of one or more COPC are greater than the guidelines, then further investigation will be required to laterally and vertically delineate the extent of the impact and/or recommendations made for the remediation/management of contamination to render the site suitable for the proposed development.

ITEM	DETAIL
Step 6: Specify tolerable limits on decision errors	The acceptable limits for samples are as follows: % RPD for laboratory duplicates for TPH and BTEX analysis is less than 60%; and Recovery of matrix spikes and surrogate spikes is as per the laboratory's Quality Assurance targets accepted under their National Association of Testing Authorities (NATA) accreditation. Precision is measured using the standard deviation 'SD' or Relative Percent Difference '%RPD'. Replicate data for field duplicates of organics is expected to be as follows: • RPD criteria of 50% or less, for concentrations > or = 10 times practical quantitation limits (PQL); • RPD criteria of 75% or less, for concentrations between 5 and 10 times the EQL; and • RPD criteria of 100% or less, for concentrations < 5 times PQL. Replicate data for field duplicates for inorganics, including metals is expected to be as follows: • RPD criteria of 30% or less, for concentrations > or = 10 times PQL; • RPD criteria of 75% or less, for concentrations between 5 and 10 times the EQL; and • RPD criteria of 100% or less, for concentrations < 5 times PQL. Where acceptable limits for field duplicates were not met, a discussion on low biased error will be provided. For this investigation, a decision error of 5% will be considered acceptable This error rate is in accordance with Appendix B of Schedule B(2) of the ASC NEPM. In order to achieve this level of confidence, the investigation has been designed as described below.
Step 7: Optimise the design	Soil samples were collected on both a judgemental (targeted) and systematic grid-based sampling design program, with COPC analysis based on the known site history. Soil samples were collected at relevant intervals, changes in geology or in zones of gross contamination and locations selected for efficient and representative sampling. All media sampling was completed in accordance with Reditus standard operating procedures (SOPs) and relevant industry guidelines.

6.1 Extent of Uncertainties

The sampling methodologies used by Reditus during this investigation has been designed to limit uncertainty in the results. Reditus is confident that the results of this investigation give an accurate representation of the current status of the surface soils onsite but note that in all subsurface investigations the potential remains for variability between sampling points and for conditions to be different on site from the conditions reported herein.

7 Tier 1 Assessment Criteria

Tier 1 assessment involves the comparison of monitoring data to published guideline criteria (typically presented as screening levels). Relevant criteria are selected based on the identified viable exposure pathways and COPCs and proposed land use.

In Australia, appropriate HILs (including interim HILs for vapour intrusion and, where applicable, HSLs for petroleum hydrocarbons and assessment criteria for asbestos) are used for Tier 1 screening to provide a rapid assessment of whether the site contamination may be of concern with respect to human health. Should contaminant concentrations at a site occur at levels that are below the Tier 1 levels, this implies that for the majority of the people in the population there is no significant health risk from contamination and that remedial action may not be required to protect human health.

Exceedances of the tier 1 HILs should be identified and considered. Tier 1 HIL exceedances do not imply that a risk is necessarily present, but that further assessment may be justified. Tier 1 HILs are not intended to indicate a clear demarcation between acceptable and unacceptable. Marginal exceedances may not require quantitative Tier 2 risk assessment to conclude that further assessment is not necessary. The magnitude of the exceedance should be considered in the context of the CSM (that is, whether the exposure pathways are plausible and whether exposure will result in harm).

Tier 1 screening criteria (including HILs and HSLs) should only be used where there has been adequate characterisation of a site (that is, appropriate representative sampling has been carried out). For this investigation, the maximum reported concentrations for each sample and analyte will be compared against the tier 1 criteria. Should any individual sample exceedance of the tier 1 criteria exist, the 95% Upper Confidence Limit (UCL) of the analyte for the site data set was calculated and compared to relevant Tier 1 screening criteria. However, the implications of localised elevated values should also be considered. In order to adopt the 95% UCL result, the analyte data set must also meet the following criteria:

- The standard deviation (SD) of the results should be less than 50% of the Tier 1 screening criteria.
- No single value exceeds 250% of the relevant Tier 1 screening criteria (characterised as a 'hot-spot').

Where site data exceeds the screening levels or suitable screening levels cannot be identified, further consideration (Tier 2 assessment) is required.

7.1 Soil Assessment Criteria

Tier 1 assessment involves the comparison of monitoring data to published guideline criteria (typically presented as screening levels). Relevant criteria are selected based on the identified viable exposure routes and the available data. Where site data exceeds the screening levels or suitable screening levels cannot be identified, further consideration (Tier 2 assessment) is required.

The tier 1 assessment criteria were adopted from:

- National Environment Protection Council (NEPC) 1999, 'Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of site Contamination) Measure (NEPM), as amended in 2013'.
- CRC Care (2011) Health screening levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document.
- PFAS National Environmental Management Plan Version 2.0 – January 2020 National Chemicals Working Group of the Heads of EPAs Australia and New Zealand, Table 2 – Human health investigation levels for soil and Table 3 – Ecological guideline values for soil (PFAS NEMP).

The soil assessment criteria (SAC) adopted for this assessment were:

- NEPC (2013) NEPM HIL-B criteria values have been adopted to assess concentrations of COPC in soil for site suitability and human health in a high-density residential and commercial/industrial land use scenario.
- NEPC (2013) NEPM HSL-B and HSL-D guidelines for vapour intrusion have been adopted to evaluate the risk posed from vapour intrusion in a high-density residential and commercial/industrial land use scenario. As outline in the NEPM (2013) and in the context of the proposed development HSL-D guidelines due to communal

basement carparking would more appropriately characterise the majority of the site. However, due to the absence of finalised plans both have been adopted. The soil HSLs are based on depth of impacts, overlying soil type and land use. The selection of both HSL-B and HSL-D was to screen for the site for both land use scenarios in relation to the potential receptor/s onsite and the exposure that may be experienced. After a review of subsurface conditions, the guidelines for clay were selected. The 0-1 m, 1-2 m, 2-4 m, and >4 m criteria values have been adopted after a review of finished borehole and sample depths which were noted to be up to 8.0 mbgl.

- NEPC (2013) NEPM ML residential/parkland and commercial/industrial guidelines have been adopted and are used to consider the potential formation of light non-aqueous phase liquids, fire and explosion risks and damage to buried infrastructure. A fine-grained soil type was selected after a review of subsurface conditions encountered during investigation works completed at the site.
- NEPC (2013) NEPM ESLs and EILs were both selected to determine the risk of potential contamination to identified ecological receptors on the site, in the context of an urban residential/public open space. Both ESL and EIL criteria values are applicable for the first 2m of the soil profile.
- EIL criteria values were derived using academic values and where appropriate using the NEPM EIL Interactive Calculation Worksheet available at http://www.nepc.gov.au/nepms/assessment-site-contamination/toolbox. The output from the EIL calculation is available in **Appendix F**. The following input parameters were adopted from the NSW Government eSpade viewer to derive EILs, noting that where a range of values were given, the average of those two values was selected as an input:
  - **Cation exchange capacity (CEC):** 9.76 $cmol_c/kg$
  - **Clay (%):** 46.6%
  - **pH:** 4.82
  - **Soil organic carbon (OC %):** 0.5%
- The CRC Care (2011) Soil HSLs for Direct Contact were selected to evaluate the risk of soil contamination to identified human receptors via the direct contact exposure pathway in a commercial/industrial land use scenario.
- Soil analytical results for the in-situ acid sulfate soil assessment will be compared against the *Action Criteria* outlined in the Acid Sulfate Soil Manual (1998) Acid Sulfate Soil Management Advisory Committee, NSW (ASSMAC 1998). As well as the National Acid Sulfate Soils Guidance: *national acid sulfate soils identification and laboratory methods manual (NASS 2018)*.

High-density residential (NEPM B) land use scenario soil analytical results are tabulated in **Table 1**, **Appendix C**, and guideline criteria are presented below in **Table 7**.

Commercial/industrial (NEPM D) land use scenario soil analytical results are tabulated in **Table 2**, **Appendix C**, and guideline criteria are presented below in **Table 8**.

Table 7. Adopted Soil Assessment Criteria (mg/kg) – NEPM High Density Residential

CHEMICAL GROUP	ANALYTE	HIL-B	HSL-B, CLAY				EIL	ESL	ML
			0-1 m	1-2 m	2-4 m	>4 m	URBAN RES & PUBLIC OPEN SPACE	URBAN RES, FINE, 0-2 M	COMM/IND, FINE SOIL
BTEX	Naphthalene	-	5	NL	NL	NL	170	-	-
	Benzene	-	0.7	1	2	3	-	65	-
	Toluene	-	480	NL	NL	NL	-	105	-
	Ethylbenzene	-	NL	NL	NL	NL	-	125	-
	Xylene Total	-	110	310	NL	NL	-	45	-
TRH	C_6-C_{10} Fraction (F1)	-	-	-	-	-	-	-	800
	C_6-C_{10} (F1 minus BTEX)	-	50	90	150	290	-	180	-
	>C_{10}-C_{16} Fraction (F2)	-	-	-	-	-	-	120	1,000
	>C_{10}-C_{16} Fraction (F2 minus Naphthalene)	-	280	NL	NL	NL	-	-	-
	>C_{16}-C_{34} Fraction (F3)	-	-	-	-	-	-	1,300	3,500
	>C_{34}-C_{40} Fraction (F4)	-	-	-	-	-	-	5,600	10,000
PAH	Benzo(a) pyrene	-	-	-	-	-	-	0.7	-
	Benzo(a)pyrene TEQ (LOR)	4	-	-	-	-	-	-	-
	PAHs (Sum of total)	400	-	-	-	-	-	-	-
Metals	Arsenic	500	-	-	-	-	100	-	-
	Cadmium	150	-	-	-	-	-	-	-
	Chromium (III+VI)	500 [1]	-	-	-	-	410 [2]	-	-
	Copper	30,000	-	-	-	-	70	-	-

CHEMICAL GROUP	ANALYTE	HIL-B	HSL-B, CLAY				EIL	ESL	ML
			0-1 m	1-2 m	2-4 m	>4 m	URBAN RES & PUBLIC OPEN SPACE	URBAN RES, FINE, 0-2 M	COMM/IND, FINE SOIL
	Lead	1,200	-	-	-		1,100	-	-
	Mercury	120	-	-	-		-	-	-
	Nickel	1,200	-	-	-		160	-	-
	Zinc	60,00	-	-	-		280	-	-
OCP	Aldrin + Dieldrin	10	-	-	-		-	-	-
	Chlordane	90	-	-	-		-	-	-
	DDT	-	-	-	-		180	-	-
	DDT+DDE+DDD	600	-	-	-		-	-	-
	Endosulfan	400	-	-	-		-	-	-
	Endrin	20	-	-	-		-	-	-
	Heptachlor	10	-	-	-		-	-	-
	Hexachlorobenzene	15	-	-	-		-	-	-
	Methoxychlor	500	-	-	-		-	-	-
OPP	Chlorpyrifos	340	-	-	-		-	-	-
PCB	PCBs (Sum of total)	1	-	-	-		-	-	-
PFAS	Perfluorohexane sulfonic acid (PFHxS)	2	-	-	-		-	-	-
	Perfluorooctane sulfonic acid (PFOS)	2	-	-	-		-	0.14	-
	Perfluorooctanoic acid (PFOA)	20	-	-	-		-	10	-
	Sum of PFHxS and PFOS	2	-	-	-		-	-	-

Table 8. Adopted Soil Assessment Criteria (mg/kg) – NEPM Commercial/Industrial

CHEMICAL GROUP	ANALYTE	HIL-D	HSL-D, CLAY				ML COMM/IND, FINE SOIL	CRC CARE HSL-D COMMERICAL/INDSUTRIAL
			0-1 m	1-2 m	2-4 m	>4 m		
BTEX	Naphthalene (BTEX)	-	NL	NL	NL	NL	-	11,000
	Benzene	-	4	6	9	20	-	430
	Toluene	-	NL	NL	NL	NL	-	99,000
	Ethylbenzene	-	NL	NL	NL	NL	-	27,000
	Xylene Total	-	NL	NL	NL	NL	-	81,000
TRH	C_6-C_{10} Fraction (F1)	-	-	-	-		800	26,000
	C_6-C_{10} (F1 minus BTEX)	-	310	480	NL	NL	-	-
	>C_{10}-C_{16} Fraction (F2)	-	-	-	-	-	1,000	20,000
	>C_{10}-C_{16} Fraction (F2 minus Naphthalene)	-	NL	NL	NL	NL	-	-
	>C_{16}-C_{34} Fraction (F3)	-	-	-	-	-	5,000	27,000
	>C_{34}-C_{40} Fraction (F4)	-	-	-	-	-	10,000	38,000

NL – No limit
[1] Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatism.
[2] Chromium (III) EIL criteria has been applied to concentrations of Chromium (III+VI) for conservatism.

7.2 Groundwater Assessment Criteria

Selection of the groundwater assessment criteria (GAC) was based on the proximity of the site to sensitive surrounding surface water receptors, groundwater extraction in the area, and water quality of the aquifer. The groundwater analytical data were compared against the following adopted Tier 1 screening criteria:

- NEPM ASC (2013) HSLs for vapour intrusion HSL-A&B for residential land use with groundwater depth between 2 and <8 m within clay.
- NEPM ASC (2013) HSLs for vapour intrusion HSL-D for commercial/industrial land use with groundwater depth between 2 and <8 m within clay.
- ANZG 2018 – 95% species protection default guideline value (DGV) (supersedes the NEPM ASC (2013) Groundwater Investigation Levels (GILs)) for marine water as Powell Creek is a brackish estuarine environment.
- PFAS National Environmental Management Plan Version 2.0 – January 2020 National Chemicals Working Group of the Heads of EPAs Australia and New Zealand, 95% species protection marine water guidelines for broader regional based impact assessment and 99% for protection for marine water in accordance with National Water Quality Guidelines (WQG) for bio accumulative contaminants (PFAS NEMP).

The ANZG (2018) is a revision of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ 2000) presented as an online platform, to improve usability and facilitate updates as new information becomes available.

Revisions to DGVs since the ANZECC & ARMCANZ (2000) guidelines have been provided for the 'aquatic ecosystem' community value. DGVs have been revised for physical and chemical (PC) stressors based on increased understanding, broader monitoring data collected since 2000.

The NEPM ASC (2013) GILs were derived using the ANZECC & ARMCANZ (2000), which were subsequently revised (superseded) in ANZG (2018). As such, the ANZG (2018) DGVs will be used as an initial screening in replace of the NEPM ASC (2013) GILs as they provide concentrations which once exceeded require further investigation into receptors and points of extraction and use.

7.2.1 HUMAN HEALTH – VAPOUR INTRUSION

The groundwater concentrations have been assessed against the NEPC (2013) NEPM HSL-A&B and HSL-D to evaluate the risk posed from vapour intrusion. The selection of HSL-A&B and HSL-D was based on the proposed residential/commercial development, the potential receptor/s onsite, and the exposure that may be experienced. HSLs for clay have been adopted after a review of subsurface conditions encountered during investigation works completed at the site.

7.2.2 HUMAN HEALTH – DRINKING WATER

The NSW DECC (2007) *Guidelines for the Assessment and Management of Groundwater Contamination* describes the process involved in identifying the likely environmental values which must be considered to be preserved in groundwater investigations at contaminated sites. Based on the NSW DECC (2007) Guidelines, determination of environmental values follows the steps below:

- Determine whether the aquifer beneath the site is included in the NSW Department of Natural Resources (NSW DNR) list of major aquifers of drinking water quality.
- Determine the identified uses of groundwater from the aquifer.
- Assess groundwater indicators to determine whether the aquifer is suitable for use as a drinking water source. The NSW DECC has stated that "Groundwater with TDS concentrations below 2000 mg/L is suitable for potential drinking water supply, and hence should be afforded this level of protection from contamination unless other site-specific factors, such as low yield, render such use unlikely." (NSW DECC, 2007).

Reditus note the following site hydrogeological conditions:

- The site is not situated within a known drinking water groundwater management unit (GMU) protected by the NSW DNR as an actual or potential drinking water supply (NSW DECC, 2007).
- The site is located within an urban area and is connected to a potable reticulated water supply. Therefore, groundwater is unlikely to be used for exaction purposes.

- The site and surrounding area have been used for commercial/industrial uses since at least the 1940s, therefore, groundwater in the area is unlikely to be used as a drinking water resource.

Based on the known commercial/industrial nature of the surrounding area, the presence of a reticulated water supply in the highly urbanised environment, the absence of registered groundwater bores nominated for drinking water use within a 1 km radius of the site (apart from one bore registered for "household purposes") – the use of groundwater in the immediate vicinity of the site for domestic purposes (both potable and non-potable use) is considered highly unlikely.

As such, the Australian Drinking Water Guidelines (2011) for both human health and aesthetics were not considered when adopting the GACs.

7.2.3 HUMAN HEALTH – RECREATIONAL WATER GUIDELINES

Given the proximity of Powells Creek to the site (located approximately 330 m west of the site) groundwater underlying the site likely discharges into Powells Creek. Therefore, recreation water guidelines have also been adopted for this assessment. The recreation water guideline values have been derived from the Australian Drinking Water Guidelines (2011) for human health by multiply the drinking water guidelines by a factor of 10, to adjust for the reduced daily intake during swimming and recreational activities in water (i.e., 10% of drinking water intake).

Recreational water guidelines values for PFAS have been adopted from the NHMRC (2019) *Guidance on Per and Polyfluoroalkyl (PFAS) in Recreational Water* publication.

7.2.4 ECOLOGICAL GROUNDWATER ASSESSMENT CRITERIA

Use of the 95% protection level (for the ANZECC 2000 Guidelines) assumed that the surrounding watercourses are moderately disturbed ecosystems. This is as defined in Section 3.1 of the guidelines as receiving road and storm water runoff from adjacent industry and residential properties, consistent with the setting and surrounding environment of the site.

The ANZG (2018) 95% marine water guidelines for groundwater were adopted as screening criteria, based on the nearest surface water receptors and discharge point for groundwater leaving the site being Powells Creek, which drains into the Parramatta River, which is noted to be brackish and saline in nature at the point.

The PFAS NEMP (2020) 95% species protection interim marine water guidelines were adopted as screening criteria based on the ultimate marine water receiving body of the Parramatta River and Sydney Harbour. Given the moderately to highly disturbed nature of this environment, the Water Quality Guidelines advice to adopt the 99% protection levels due to potential bioaccumulation and biomagnification in wildlife has not been adopted in this instance. They have however been included within the tables and discussion of this report for completeness.

Groundwater analytical results are tabulated against the groundwater assessment criteria in **Table 9.**

Table 9. Adopted Groundwater Assessment Criteria (ug/L)

CHEMICAL GROUP	ANALYTE	HSL-A/B - CLAY			HSL-D - CLAY			ANZG (2018) 95% PROTECTION MARINE WATER	PFAS NEMP 2020 v2 99% INTERMIN MARINE GUIDELINES	RECREATIONAL WATER GUIDELINES
		2-4 m	4-8 m	>8 m	2-4 m	4-8 m	>8 m			
BTEX	Naphthalene	NL	NL	NL	NL	NL	NL	70	-	-
	Benzene	5,000	5,000	5,000	30,000	30,000	35,000	700	-	10
	Toluene	NL	NL	NL	NL	NL	NL	180	-	8,000
	Ethylbenzene	NL	NL	NL	NL	NL	NL	80	-	3,000
	Xylene Total	NL	NL	NL	NL	NL	NL	-	-	6,000
TRH	C_6-C_{10} Fraction (F1)	-	-	-	-	-	-	-	-	800
	C_6-C_{10} (F1 minus BTEX)	NL	NL	NL	NL	NL	NL	-	-	-
	>C_{10}-C_{16} Fraction (F2)	-	-	-	-	-	-	-	-	-
	>C_{10}-C_{16} Fraction (F2 minus Naphthalene)	NL	NL	NL	NL	NL	NL	-	-	-
	>C_{16}-C_{34} Fraction (F3)	-	-	-	-	-	-	-	-	-
	>C_{34}-C_{40} Fraction (F4)	-	-	-	-	-	-	-	-	-
PAH	Anthracene	-	-	-	-	-	-	0.4	-	-
	Benzo(a) pyrene	-	-	-	-	-	-	0.2	-	0.1
	Fluoranthene	-	-	-	-	-	-	1.4	-	-
	Phenanthrene	-	-	-	-	-	-	2		
Metals	Arsenic	-	-	-	-	-	-	24	-	100
	Cadmium	-	-	-	-	-	-	5.5	-	20
	Chromium (III+VI)	-	-	-	-	-	-	1**	-	0.5**

CHEMICAL GROUP	ANALYTE	HSL-A/B - CLAY			HSL-D - CLAY			ANZG (2018) 95% PROTECTION MARINE WATER	PFAS NEMP 2020 v2 99% INTERMIN MARINE GUIDELINES	RECREATIONAL WATER GUIDELINES
		2-4 m	4-8 m	>8 m	2-4 m	4-8 m	>8 m			
	Copper	-	-	-	-	-	-	1.3	-	20,000
	Lead	-	-	-	-	-	-	4.4	-	100
	Mercury	-	-	-	-	-	-	0.4	-	10
	Nickel	-	-	-	-	-	-	70	-	200
	Zinc	-	-	-	-	-	-	8	-	-
OCP	DDT	-	-	-	-	-	-	-	-	90
	Endrin	-	-	-	-	-	-	0.008	-	-
	g-BHC (Lindane)	-	-	-	-	-	-	-	-	100
	Heptachlor	-	-	-	-	-	-	-	-	3
	Hexachlorobenzene	-	-	-	-	-	-	0.1	-	-
OPP	Azinophos methyl	-	-	-	-	-	-	-	-	300
	Bromophos-ethyl	-	-	-	-	-	-	-	-	100
	Chlorpyrifos	-	-	-	-	-	-	0.009		100
	Diazinon	-	-	-	-	-	-	-	-	40
	Dichlorvos	-	-	-	-	-	-	-	-	50
	Dimethoate	-	-	-	-	-	-	-	-	70
	Ethion	-	-	-	-	-	-	-	-	40
	Fenitrothion	-	-	-	-	-	-	-	-	70
	Malathion							-	-	700

CHEMICAL GROUP	ANALYTE	HSL-A/B - CLAY			HSL-D - CLAY			ANZG (2018) 95% PROTECTION MARINE WATER	PFAS NEMP 2020 v2 99% INTERMIN MARINE GUIDELINES	RECREATIONAL WATER GUIDELINES
		2-4 m	4-8 m	>8 m	2-4 m	4-8 m	>8 m			
	Parathion	-	-	-	-	-	-	-	-	200
VOC	1,3-dichloropropane	-	-	-	-	-	-	1,100	-	-
	1,4-dichlorobenzene	-	-	-	-	-	-	-	-	400
	Bromomethane	-	-	-	-	-	-	-	-	10
	Carbon tetrachloride	-	-	-	-	-	-	240	-	30
	Chlorobenzene	-	-	-	-	-	-	55	-	3,000
	Chloroform	-	-	-	-	-	-	770	-	-
	Hexachlorobutadiene	-	-	-	-	-	-	-	-	
	Isopropylbenzene	-	-	-	-	-	-	30	-	-
	Styrene	-	-	-	-	-	-	300	-	-
	Trichloroethene (TCE)	-	-	-	-	-	-	330	-	-
	Tetrachloroethene (PCE)	-	-	-	-	-	-	70	-	500
	Vinyl Chloride	-	-	-	-	-	-	100	-	3
PFAS	Perfluorooctane sulfonic acid (PFOS)	-	-	-	-	-	-	-	0.00023	-
	Perfluorooctanoic acid (PFOA)	-	-	-	-	-	-	-	19	10
	Sum of PFHxS and PFOS	-	-	-	-	-	-	-	-	2

*freshwater criteria adopted in absence of marine criteria

** Cr(VI) adopted for total of Cr(III) & Cr(VI)

7.3 Hazardous Ground Gas Assessment Criteria

Specific criteria for the assessment of selected bulk landfill gases (methane, carbon dioxide, carbon monoxide and hydrogen sulphide) is not provided in NEPC (2013) NEPM. However, the NSW EPA (2020) Assessment and management of hazardous ground gases contaminated land guidelines provides the framework for a multilevel risk assessment so that potential contamination from landfill gases can be adequately characterised and current and future gas generation trends, migration and accumulation can be appropriately managed.

The risk assessment methodology uses Gas Screening Values (GSV), which is a combination of both gas concentrations and borehole flow rates to define a Characteristic Situation (CS) for a site. A 'worst case' value will be adopted for this assessment so maximum values will be used for GSV calculation and CS. The risk assessment framework using the Modified Wilson and Card Classification can be summarised as follows:

1. Calculate the GSV by multiplying the maximum borehole flow rate by the maximum gas concentration:
   - GSV = maximum borehole flow rate (L/hr) x maximum gas concentration (% v/v).
2. Assess whether the gas concentrations and flow rates correspond with typical sources of gas generation identified at the subject site.
3. Using Table 7 (NSW EPA 2020) determine the CS for the subject site.
4. Assess the CS in the context of the existing buildings or proposed development, using Table 8 and Table 9 (NSW EPA 2020) to determine the appropriate guidance value and potential gas protection measures to be applied at the site.

Gas concentrations will also be compared against the following threshold levels presented in NSW EPA Environmental Guidelines: Solid waste landfills (NSW EPA 2016):

- Subsurface landfill gas: Methane concentrations above 1% v/v and carbon dioxide at concentrations of 1.5% v/v above established natural background levels.

7.4 Soil Vapour Assessment Criteria

The tier 1 assessment criteria were adopted from:

- National Environment Protection Council (NEPC) 1999, 'Schedule B(1) Guideline on Investigation Levels for Soil and Groundwater, National Environment Protection (Assessment of Site Contamination) Measure (NEPM), as amended in 2013'.

The soil vapour assessment criteria (SVAC) adopted for this assessment were:

- Interim Soil Vapour Health Investigation Levels (ISVHIL) for volatile organic chlorinated compounds (VOCCs) for a high density residential (ISVHIL-B) and commercial/industrial (ISVHIL-D) land use scenario have been adopted as soil vapour assessment criteria for the site based on the proposed development, the absence of finalised plans, the potential on-site receptors, and the exposure that may be experienced.
- NEPC (2013) NEPM HSL-B and HSL-D have been adopted to evaluate the risk posed from vapour intrusion. The selection of HSL-B and HSL-D was based on the proposed development, the potential on-site receptors, and the exposure that may be experienced. Clay was selected as the predominant soil type to characterise the subsurface conditions on site and depths between 2-4 m have been assessed based on the top of the screened interval within dual purpose monitoring wells. This conservatively characterises the site as it assumes all soil vapour load results from the shallowest screened areas of the well.
- In the absence of state or nationally endorsed assessment criteria for VOCs other than those published in the NEPC (2013) NEMP, the USEPA Regional Screening Levels (RSLs) have also been adopted. These provide another set of tier one screening criteria that can be used to determine the requirement for further assessment. They have been sourced directly from the USEPA RSL Calculator Tool and adjusted for a threshold hazard index of 1 and a non-threshold (cancer) risk of less than 1×10^{-5}. An additional attenuation factor analogous to that published in Table 1A(2) of the NEPC (2013) NEMP has been applied. This was calculated by multiplying the indoor air guideline by the attenuation factor of 10 for to achieve a tier 1 sub soil screening guideline. The attenuation factor was sourced from section 5.5.2 of Schedule B1 NEPM ASC (2013).

Soil gas assessment analytical results are tabulated in **Table 4, Appendix C**, and guideline criteria are presented below in **Table 9**.

Table 9. Adopted Soil Vapour Assessment Criteria (ug/m^3)

CHEMICAL GROUP	ANALYTE	ISV HIL-B VOLATILE ORGANIC CHLORINATED COMPOUNDS	HSL-A/B SOIL VAPOUR, 2-4 m	ISV HIL-D VOLATILE ORGANIC CHLORINATED COMPOUNDS	HSL-D SOIL VAPOUR, 2-4 m	USEPA RSLs RESIDENTIAL AIR THQ = 1.0	USEPA RSLs INDUSTRIAL AIR THQ = 1.0
VOCs	TCE	20	-	80	-	-	-
	1,1,1-TCA	60,000	-	230,000	-	-	-
	PCE	2,000	-	8,000	-	-	-
	cis-1,2-dichloroethene	80	-	300	-	-	-
	Vinyl chloride	30	-	100	-	-	-
	1,2,4-trimethylbenzene	-	-	-	-	630	2,600
	1,3,5-trimethylbenzene	-	-	-	-	630	2,600
	Chloroform	-	-	-	-	12	53
	Chloromethane	-	-	-	-	94	390
	Cyclohexane	-	-	-	-	6,300	26,000
	Styrene	-	-	-	-	10,000	44,000
	Carbon disulfide	-	-	-	-	7,300	31,000
	Heptane	-	-	-	-	4,200	18,000
	Hexane	-	-	-	-	1,400	6,100
	2-Propanol	-	-	-	-	2,100	8,800
	Methyl Methacrylate	-	-	-	-	7,300	31,000
	Propene	-	-	-	-	31,000	130,000
BTEX	Naphthalene	-	45,000	-	240,000	-	-

CHEMICAL GROUP	ANALYTE	ISV HIL-B VOLATILE ORGANIC CHLORINATED COMPOUNDS	HSL-A/B SOIL VAPOUR, 2-4 m	ISV HIL-D VOLATILE ORGANIC CHLORINATED COMPOUNDS	HSL-D SOIL VAPOUR, 2-4 m	USEPA RSLs RESIDENTIAL AIR THQ = 1.0	USEPA RSLs INDUSTRIAL AIR THQ = 1.0
	Benzene	-	40,000	-	230,000	-	-
	Toluene	-	53,000,000	-	NL	-	-
	Ethylbenzene	-	16,000,000	-	NL	-	-
	Xylene (o)		-	-	-	1,000	4,400
	Xylene Total	-	11,000,000	-	NL	-	-
TRH	C_6-C_{10} Fraction (F1)	-	9,900,000	-	55,000,000		
	>C_{10}-C_{16} Fraction (F2)	-	-	-	-	-	-

USEPA RSLs do not allow for vapour attenuation due to the presence of a concrete slab nor the soil to air partitioning co-efficient. These values should be adopted with caution.

8 Methodology

The methods used for the collection of data are presented in the following sections.

8.1 Schedule of Works

The schedule of fieldworks completed at the site and Reditus personnel involved is provided in **Table 10** below. It is noted that all Reditus personnel involved are suitably qualified and experienced in the collection of environmental samples and environmental site investigations.

Table 10. Schedule of Works

DATE	DETAIL OF WORKS	REDITUS PERSONNEL
24 February 2022	Site inspection and walkover.	Dean Stafford *Principal Environmental Scientist*
5-9 & 16 December 2022	Soil investigation, drilling and monitoring well install and development (12th of December).	Jack Palma *Senior Environmental Scientist*
19 & 20 December 2022	Groundwater and round one of hazardous ground gas monitoring.	Kyle Sier *Graduate Environmental Scientist*
9 February 2023	VOC gas grab sampling (summa cannisters)	Dean Stafford *Principal Environmental Scientist*
1 March 2023	Round two of hazardous ground gas monitoring	Sophie Macalpine & Mia Schaeper *Graduate Environmental Scientists'*

8.2 Sampling Analysis Plan and Sampling Rationale

The intention of the sampling plan was to attain the objectives stated in **Section 1.1**. To achieve this a judgemental (targeted) and systematic grid-based sampling design program was adopted for this DSI. The sampling plan was based on a historical desktop information, the specific design plans for the site, site observations, NSW EPA (2022) Sampling Design Guidelines, and had the goal of providing sufficient data in conjunction with previous investigations to allow for in-situ assessment and characterisation of soil, groundwater, soil vapour and landfill gases at the site.

Sample locations are presented on **Figure 2, Appendix A**. A total of 47 boreholes (BH01 to BH47) were completed with samples obtained from 47 locations with refusal at BH10. Eight (8) borehole locations were converted to groundwater

and hazardous ground gas monitoring locations. An additional three (3) existing groundwater wells were also redeveloped and sampled as part of site assessment. A groundwater monitoring event and two round of gas monitoring completed using a GFM430 landfill gas meter. Soil vapour was additionally assessed at MW01 and MW08 utilising summa cannister ground gas sampling methodology.

As previous investigations have occurred onsite performed by Douglas Partners and ASA, the current investigation aimed to further characterise the present condition of the site as well as target previous and existing UPSS infrastructure. Access to soils to the central locations of the site were limited to accessible subfloor spaces within the building and as such laboratory results of ASA investigation was also compared to improve site sampling density and characterisation.

8.3 Soil Sampling Methodology

Soil samples were collected from the 47 locations within the proposed development footprint. These samples were collected from within the existing infrastructure utilising concrete coring to access the subsurface and at the periphery of the buildings in accessible carpark and landscaped garden bed areas.

Based on the CSM, soil samples were collected from the near-surface (0-0.1m), at changes in lithology or zones with any visual (staining or discolouration) or olfactory signs of contamination.

The soil samples were collected directly from the push tube liner or auger. Efforts were made to minimise disturbance of the material being sampled to the extent practicable. Such techniques included removing the outside layer of material and collecting from the centre of the recovered auger cuttings, to prevent cross-contamination and minimise the potential for loss of VOCs.

The soil samples were placed directly into a laboratory prepared 250 mL glass jar with the details of the sample, including the sample name, the job number, the date of sample and the sample depth.

Sample preservation was undertaken in accordance with NEPC (2013) NEPM, with samples immediately placed and stored in an ice filled esky to keep them chilled, prior to being couriered to the laboratory under a signed chain of custody (COC) form filled out with the required analysis.

Each soil sample was described in general accordance with the Unified Soil Classification System (USCS) and details of any discolouration, staining, odours or other indicators of contamination were also noted.

- Samples were collected with clean new nitrile gloves to prevent cross-contamination.
- Samples were placed in an ice-filled esky to keep them below 4°C in accordance with US EPA SW-846 method.
- Samples will be transferred to the laboratory under a completed chain-of-custody.

In summary, soil samples were collected in accordance with Reditus standard operating procedures which are based on the NEPC (2013) NEPM, Australian Standard AS4482.1-2005 and AS4482.2-1999 and EPA requirements.

8.4 Monitoring Well Installation

Newly installed monitoring wells were drilled with solid flight auger drilling techniques. Well construction details were recorded on the borehole logs.

Monitoring wells were installed to a target depth of approximately 6-8 mbgl with screened interval spanning above the water table to capture potential free phase hydrocarbons and to provide unsaturated screen interval for the purposes of soil gas and landfill gas assessment. Monitoring wells were fitted with dedicated gas sampling well caps to provide dual purpose for the sampling of gas and groundwater.

Well construction, including screened intervals, were based on observations made during the drilling at each location. The well screens comprised of 50 mm internal diameter (ID), Class 18, threaded, flush jointed uPVC with machine slots of 0.4 mm width and casing comprised 50 mm ID, Class 18, threaded, flush jointed uPVC. Each groundwater monitoring well was gravel packed with 1-2mm of washed graded gravel to the top of the screen interval with a minimum 0.5-1.0 m thick bentonite seal installed above the gravel pack. All wells were completed with a mix of hydrated bentonite, backfill and cement grout to the surface. Wells were finished at the ground surface, capped with dedicated gas sampling well caps (to provide dual purpose for the sampling of gas and groundwater) and flush gatic cover.

All monitoring wells were developed using a combination of steel bailer and submersible pump (12V Super Twister) until majority of the sediments are removed from the water column ensuring a good connection between the

screened borehole interval and the surrounding aquifer. Where practicable, a minimum quantity of three casing volumes of water was removed. The wells were then be left to stabilise prior to purging and sampling.

8.5 Groundwater Sampling

All newly installed monitoring wells were gauged using an oil/water interface probe prior to purging and sampling. Depth to standing water level (SWL) was recorded from the top of casing (TOC).

The wells were then purged using a low flow peristaltic pump until groundwater quality parameters stabilised to within 10% of the previous reading with exception of MW08 which was sampled with a dedicated HDPE plastic bailer to due to the height of the water column and lack of recharge. The water quality parameters were measured with a calibrated water quality meter to record measurements for pH, redox potential, electrical conductivity (mS/cm), dissolved oxygen and temperature (˚C).

The interface probe was thoroughly decontaminated between gauging events with a phosphate free detergent (Liquinox) and rinsed with deionized water.

Groundwater samples were collected directly into appropriately preserved laboratory supplied sampling containers and labelled with the date, location, and project identification number. The samples for dissolved metals were field filtered using a 0.45-micron Millipore filter. The sampling methodologies outlined in the PFAS NEMP 2.0 (2020) for PFAS sampling were adhered to.

8.6 Hazardous Ground Gas Monitoring

The presence and migration of hazardous ground gas can be significantly affected by atmospheric conditions including barometric air pressure, wind speed and rainfall. The NSW EPA (2020) guidance advises that monitoring should include measurements undertaken during falling atmospheric pressure with the key requirement being to capture the 'worst case conditions' which is defined in the guidelines as a 5th percentile three-hour pressure decrease rate based on a two-year dataset from the nearest Bureau of Meteorology (BoM) website.

The typical weather systems experienced in NSW present a logistical challenge for conducting monitoring that ensure capture of a 'worst case scenario'. However, attempts were made to conduct hazardous ground gas monitoring during falling atmosphere conditions and two rounds of monitoring were also completed to ensure representative results were obtained.

Subsurface gas monitoring was undertaken by experienced Reditus environmental scientists in general accordance with methodology outlined in NSW EPA guidelines (2020). The specific methodology for the hazardous ground gas monitoring completed at the site was as follows:

- Collection and review of relevant atmospheric data from the nearest BoM monitoring site (Sydney Olympic Park) for analysis of meteorological trends before and during the monitoring period.
- Monitoring was conducted with a GFM430/GA5000 gas analyser, pre-calibrated by the supplier for detection as a percentage of the total volume of air (%v/v) of the following parameters:
  - Methane, carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, lower explosive limit (LEL), atmospheric pressure, borehole/differential pressure, and borehole flow rate.
- General site observations/conditions were recorded prior to monitoring, including weather and atmospheric pressure.
- Specific observations at each monitoring location were recorded, including the well condition and ground cover, with the integrity of the well documented prior to sampling.
- The landfill gas analyser was connected directly to the monitoring well locations using quick-connect fittings and LDPE silicon tubing.
- Monitoring was undertaken for a minimum of 90 seconds at each location to allow readings to stabilise and recording of readings for methane, carbon dioxide, and oxygen every 30 seconds.
- Recording of measured flow and atmospheric pressure at the time of sampling at each location.

It is noted that two (2) rounds of landfill gas monitoring were completed landfill gas monitoring rounds were completed a minimum of two weeks apart and during falling or low-pressure atmospheric conditions to replicate worst case scenario conditions.

8.7 Soil Vapour Sampling Methodology

Soil vapour samples were collected using TO-17 methods from two (2) selected monitoring wells in the vicinity of one of the historical tank pits and on the upgradient boundary of the site to determine if volatile compounds are likely migrating through landfill gas from the nearby Bicentennial Park. Vapour samples were collected from each of the monitoring wells using laboratory prepared evacuated canisters connected to the monitoring well via the gas cap, and collected over approximately 2 – 5min. Negative pressure (-9mmHg) remained in the canister after sampling was complete

Upon completion of sampling the evacuated canisters were transferred to the laboratory under a completed chain-of-custody, which included the date, sample location ID, volume of sample collected, canister ID, and analysis required.

8.8 Laboratory Analysis and Methods

Laboratory analytical methods and analyte PQLs are shown in the analytical certificates provided in **Appendix H**. Furthermore, the analytical suites performed during this investigation are provided in **Section 1.2**.

9 Quality Assurance and Quality Control (QAQC)

9.1 Field Quality Assurance

9.1.1 DETAILS OF SAMPLING TEAM

Fieldworks completed as part of this assessment, detailed in **Section 8.1**, were completed by Reditus' Principal Environmental Scientist Dean Stafford, Senior Environmental Scientist Jack Palma and Graduate Environmental Scientists' Kyle Sier, Sophie MacAlpine and Mia Schaeper. Each of whom are suitably qualified and experienced in the collection of environmental samples and environmental site investigations.

9.1.2 DECONTAMINATION PROCEDURES CARRIED OUT BETWEEN SAMPLING EVENTS

All reusable sampling equipment was decontaminated in between each use to ensure no cross contamination occurred. Decontamination procedure involved washing of liquinox and deionized, then rinsed with deionized water. Reditus considers this to be a suitable method to prevent cross contamination during sampling.

9.1.3 CHAIN OF CUSTODY DETAILS

All samples were transported to the laboratory under a chain of custody (COC). Information on the COC included the sampler, sample identifier, sample matrix, collection date, analyses to be performed, sample preservation method, sample release date and sample received date. COCs are provided in **Appendix H** along with the laboratory reports.

9.1.4 SAMPLING SPLITTING TECHNIQUES

A soil duplicates and triplicates were collected by taking representative samples of the soil at the same depth interval. Due to the potential loss of volatiles, samples were not mixed or homogenised during collection or splitting.

9.1.5 TRIP BLANKS

Trip blanks are used to assess contamination from field conditions at the time of the sampling event and that the sampling procedures are adequate in preventing cross contamination of VOCs during sample transport and storage.

Two (2) trip blank samples was collected during the investigation one (1) during soil sampling and one (1) during the groundwater sampling. Both samples were submitted to the laboratory for the analysis of TRH and BTEX and reported concentrations below the laboratory limit of detection.

Results of trip blank analysis is provided in **Table 8, Appendix C.**

9.1.6 TRIP SPIKE

Results of analysis of trip spikes reported all analytes within acceptable recovery percentages, indicating that sampling storage and transportation procedures were adequate, with potential for cross-contamination considered minimal.

Acceptable results of the trips spike recovery analysis (recovery between 70-130%) indicated that sample storage and transport has been adequate to minimise volatile contaminant loss.

Results of the trip spikes are provided in **Table 8, Appendix C**.

9.1.7 STATEMENT OF DUPLICATE FREQUENCY

Field duplicates and triplicates were collected at a rate of 1:20 for soil samples. This rate is within the 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 and Reditus' QA frequency ranges.

The following soil QA/QC samples were collected:

- DUP01 and TRIP01 were respectively soil intra-laboratory and inter-laboratory duplicates of sample BH07_0.1.
- DUP02 and TRIP02 were respectively soil intra-laboratory and inter-laboratory duplicates of sample BH27_0.1.
- DUP03 and TRIP03 were respectively soil intra-laboratory and inter-laboratory duplicates of sample BH42_0.1.
- DUP04 and TRIP04 were respectively soil intra-laboratory and inter-laboratory duplicates of sample BH36_0.25.
- DUP05 and TRIP05 were respectively soil intra-laboratory and inter-laboratory duplicates of sample BH23_0.1.

The following groundwater QA/QC samples were collected:

- DUP1 and TRIP1 were respectively groundwater intra-laboratory and inter-laboratory duplicates of sample MW05.

9.2 Laboratory QA/QC

9.2.1 SAMPLE HOLDING TIMES

All holding times were reported as being within specified ranges.

9.2.2 LABORATORY ACCREDITATION AND ANALYTICAL METHODS USED

The primary laboratory used for samples was Envirolab Services Pty Ltd (Envirolab), while the secondary laboratory was Australian Laboratory Services Pty Ltd (ALS).

Envirolab is accredited by NATA to ISO/IEC 17025 with the accreditation number 1261, while ALS is also accredited to this standard with the accreditation number 825.

Laboratory QA/QC is provided on the laboratory reports in **Appendix H**.

9.2.3 LABORATORY CONTROL SAMPLES

Laboratory control samples were reported within acceptable ranges.

Detailed laboratory QA/QC are found in the laboratory report in **Appendix H**.

9.3 Evaluation of the QA/QC Information Compared to the DQOs

9.3.1 DOCUMENTATION COMPLETENESS:

- Soil logs, chain-of-custody forms, calibration were complete and appropriate.

Data completeness:

- All samples were received by the laboratories and analytical results reported including laboratory QA/QC.

9.3.2 DATA COMPARABILITY:

- Reditus standard operating procedures, Australian Standards and industry best practice were followed during sampling.
- Consistent field conditions and similarly trained staff were used during sampling.
- The limits of reporting are appropriate and generally consistent from each laboratory.

9.3.3 DATA REPRESENTATIVENESS:

- Reditus is confident that cross contamination has not occurred, and primary samples are representative of actual soil conditions.
- The frequency of laboratory blanks was acceptable, and the results were within specified ranges.

9.3.4 PRECISION:

- Intra-laboratory and inter-laboratory duplicates were collected at the following rates:
  - Soil and groundwater intra-laboratory and inter-laboratory duplicates frequency were collected at least 1:20.
- QA/QC sample collection rate follows the guidance provided in the Australian Standard Field procedures (AS1482.1 1997).

9.3.5 RELATIVE PERCENT DIFFERENCE

Refer to **Table 6 & Table 7, Appendix C** for Relative Percent Differences (RPDs) calculations. Reditus notes that RPDs were only calculated for groups of compounds with detections above the laboratory detection limits. RPDs for soil were reported within acceptable ranges, with exception to the following:

Soil:

Several exceedances of RPD criteria were noted from the current soil assessment. Reditus considers that these differences in reported concentrations have arisen as a result of the heterogenous nature of fill soils onsite. PAH and metal chemical groupings presented the greatest number of exceedances in soil. RPDs for PAHs ranged from 90-173% and RPDs for metals ranged from 32-148%. In addition, TRH/TPH and Dieldrin noted additional exceedances of RPDs from 143-163% and 143% for the respective groups. Reditus considers these exceedances do not affect the validity of results as the majority of RPDs were reported for locations with trace concentrations of the analyte. Any instance where a duplicate concentration exceeded the concentrations of the primary sample and/or the guideline criteria the duplicate sample has been adopted as the representative concentration from that sampling location.

Groundwater:

One exceedance of RPDs for zinc in groundwater was noted at MW05 with DUP1 reporting concentrations above LOR, no concentrations were detected in the primary or triplicate sample. It is inferred to be an anomaly of sampling with no other exceedance noted in metal or other chemical groups. The duplicate sample has been adopted as the concentration for MW05 as a result.

10 Results

10.1 Field Observations

10.1.1 SOIL

Soil samples collected from the boreholes were logged in general accordance with the USCS. Borehole logs are provided as **Appendix D**. The soils encountered during the intrusive investigation are summarised below:

Hardstand

- Bitumen hardstand was present on thoroughfares and roadways, and within carparking areas around the site.
- Concrete slabs were present inside the building, within the electrical substation and on the basketball court. Concrete anchors were encountered at boreholes BH10 and BH11, likely associated with underground fuel storage in this area.
- Pavers were present in the courtyard at borehole BH32.

Fill

Fill material underlying hardstand was variable in composition and thickness. Fill material can be summarised as follows:

- Clayey silty, grey/brown, dry (reworked shale).
- Silty clay with trace fine sand (reworked natural).
- Gravelly silty sand, grey/brown, some clay, slightly moist.
- Roadbase consisting of grey silty gravel where bitumen was present at surface.
- Bituminous gravel was present underlying concrete slabs within the building at boreholes BH38, BH40, BH45.
- Silty sandy organic rich topsoil in garden areas.
- Anthropogenic material encountered included plastic, red brick and cement gravels.
- No potentially asbestos containing material was observed during the intrusive investigation.
- BH07 was likely drilled within the former tank pit on the northern site of the building due to the presence of approximately 3m of fill materials before natural was encountered.

Natural

Natural material was encountered in each borehole, with exception to BH10 and BH11 where refusal was met on concrete and BH34 where the borehole was terminated due to safety concerns relating to proximity of underground services. Natural materials can be summarised as follows:

- Silty Clay with trace fine sand, moderately to very stiff, slightly moist, brown/grey/orange mottled.
- Weathered Shale, brown/red/grey mottled, weak, slightly moist. Shale was generally encountered underlying silty clay, however silty clay lenses were observed within weathered shale.

10.1.2 GROUNDWATER

All groundwater monitoring wells were gauged for standing water level (SWL) and total depth on 18th & 19th December 2022 prior to commencing purging and sampling. The standing water levels were converted to groundwater elevation to assess groundwater flow directions. The groundwater gauging data is summarised in

Table 11.

Table 11. Groundwater Gauging Data

Well ID	LOCATION	DEPTH (mbTOC)	SWL (mbTOC)	TOC (mAHD)	SWL mAHD	COMMENTS
MW01	Former Diesel UST (northern boundary)	5.47	2.115	6.075	3.96	-
MW02	Former UST and bowser	6.86	2.46	10.765	8.247	-
MW03	Former UST and bowser	6.54	1.965	7.704	5.739	-
MW04	Existing Diesel UST	7.87	1.04	7.769	6.729	-
MW05	Existing Diesel UST	7.02	0.69	7.832	7.142	-
MW06	Southeast corner of main building	7.67	0.49	7.789	7.299	-
MW07	Southwest corner of the site	5.47	3.27	6.602	3.332	-
MW08	Heating Oil USTs	5.54	5.10	7.681	2.581	-
EW1	Existing Diesel UST	5.65	0.65	7.737	6.907	-
EW2	Existing Diesel UST	6.30	1.41	7.635	6.225	-
EW3	Existing Diesel UST	6.65	0.60	7.702	7.102	-

The monitoring wells were purged until stabilised physiochemical parameters were obtained, which are summarised in **Table 12** below.

Table 12. Stabilised Groundwater Physiochemical Properties

Well ID	pH	TEMP (°C)	EC (mS/CM)	DO (ppm)	REDOX (mV)	DRAWDOWN (m)	COMMENTS
MW01	6.11	18.8	1.65	1.69	96.3	1.87	Mild odour and brown/green tinge.
MW02	5.42	20.5	4.67	3.03	119.9	0.79	Cloud brown, no odour/sheen.
MW03	5.69	20.4	4.42	2.42	125.6	1.19	Cloudy, no odour/sheen.
MW04	6.15	20.7	13.64	0.88	62.5	0.83	Clear.
MW05	6.22	20.8	16.01	0.88	15.4	0.97	Clear.
MW06	6.17	20.9	15.16	0.86	38.8	1.03	Clear, slight metallic odour.

Well ID	pH	TEMP (ºC)	EC (mS/CM)	DO (ppm)	REDOX (mV)	DRAWDOWN (m)	COMMENTS
MW07	6.20	20.2	6.18	2.67	106.8	1.09	Clear
MW08	6.51	-	3.10	2.71	108.7	-	Sampled with bailer due to minimal water column.
EW1	6.26	22.3	16.10	0.81	7.8	0	Clear
EW2	6.20	19.8	10.94	1.52	41.2	1.24	Cloudy brown, no odour/sheen.
EW3	6.21	21.4	16.47	0.89	16.5	0.20	Clear, no odour.

Based on the physico-chemical parameters recorded during the groundwater monitoring event the following observations have been made:

- pH ranges between 5.42 (MW02) and 6.26 (EW1) excluding MW08, indicating a mildly acidic to acidic environment in the shallow aquifer underlying the site.
- Conductivity ranges from 1.65 mS/cm (MW01) to 16.47 mS/cm (EW3). Electrical conductivity readings indicated a brackish groundwater environment with dissolved salt and inorganics in relatively high concentrations. This inferred to be due to the proximity of the site to the nearby Powells Creek and wetland environment.
- Dissolved oxygen (DO) ranges from 0.86 ppm (MW06) to 2.67 ppm (MW07) excluding MW08, indicating moderate levels of dissolved oxygen in the shallow aquifer underlying the site.
- ORP ranged between 7.8 mV (EW1) to 125.6 mV (MW03). The results indicate an oxidising environment is present in the shallow groundwater aquifer onsite.

10.2 Soil Analytical Results (NEPM B – High Density Residential)

A summary of the soil analytical results can be found in **Table 1, Appendix C**. The following section outlines the key findings of the comparison between laboratory results and the site assessment criteria. Discussion of analytical results is provided in **Section 11.2**. The proposed development includes both high density residential and commercial development. As such the most sensitive land use criteria has been adopted and HIL-B and associated ecological screening criteria have been adopted for the site to assess the site suitability. Conversely, the NEPM (2013) describes that where a development will involve the construction of a communal basement carpark or similar then commercial/industrial screening criteria can be adopted for assessment of site suitability. As the extent of basement infrastructure is unknown comparison of high density residential and commercial, industrial guidelines have been made at this point to assess vapour risk onsite.

Soil sample locations are presented on **Figure 2, Appendix A**.

10.2.1 BTEX

Concentrations of BTEX were reported below the adopted soil assessment criteria in all soil samples submitted for analysis.

10.2.2 TRH

Concentrations of TRH were reported below the adopted soil assessment criteria in all soil samples submitted for analysis, except for the following concentrations and corresponding assessment reported in samples:

BH14_0.1

- TRH C_{16}-C_{34} Fraction (F3) – 1,800 mg/kg – exceeds ESL of 1,300 mg/kg.

BH38_0.15

- TRH C_{10}-C_{16} Fraction (F2 & F2 minus naphthalene) – 360 mg/kg exceeds ESL of 120 mg/kg.
- TRH C_{16}- C_{34} Fraction (F3) – 12,000 mg/kg exceeds ESL – 1,300 mg/kg and ML – 3,500 mg/kg.

BH40_0.25

- TRH C_{10}-C_{16} Fraction (F2 & F2 minus naphthalene) – 220 mg/kg exceeds ESL – 120 mg/kg.
- TRH C_{16}-C_{34} Fraction (F3) – 5,900 mg/kg exceeds ESL – 1,300 and ML 3,500 mg/kg.

BH45_0.2

- TRH C_{10}-C_{16} Fraction (F2 & F2 minus naphthalene) – 300 mg/kg exceeds ESL – 120 mg/kg.
- TRH C_{16}-C_{34} Fraction (F3) – 12,000 mg/kg exceeds 3,500 mg/kg exceeds ESL – 1,300 and ML – 3,500 mg/kg.

10.2.3 PAH

Concentrations of PAHs exceeded both ecological and health tier 1 criteria values at several locations.

The following locations exceeded the ESL criteria of 0.7mg/kg for Benzo(a)pyrene:

- BH02_0.1 (2.6 mg/kg), BH08_0.1 (2.9 mg/kg), BH011_0.1 (0.82 mg/kg), BH18_0.1 (0.97 mg/kg), BH29_0.4 (0.92 mg/kg), BH30_0.1 (1.8 mg/kg), BH38_0.15 (250 mg/kg), BH38_0.4 (7.8 mg/kg), BH40_0.25, BH40_0.5 (5.5 mg/kg), BH45_0.2 (79 mg/kg), and BH45_0.5 (0.98 mg/kg).

The following locations exceeded HIL-B criteria for Benzo(a)pyrene TEQ – 4 mg/kg.

- BH08_0.1 (4.6 mg/kg), BH38_0.15 (340 mg/kg), BH38_0.4 (12 mg/kg), BH40_0.25 (180 mg/kg), BH40_0.5 (8.1 mg/kg) and BH45_0.2 (120 mg/kg).

The following locations exceeded HIL-B criteria for PAHs (Sum of positives) – 400 mg/kg.

- BH38_0.15 (1,900 mg/kg), BH40_0.25 (1,300 mg/kg) and BH45_0.2 (1,100 mg/kg).

10.2.4 HEAVY METALS

Concentration of heavy metals were reported below the adopted soil assessment criteria in all soil samples submitted for analysis.

10.2.5 PCB

Concentrations of PCB were reported below the laboratory limit of reporting (LOR) and hence below the adopted soil assessment criteria in all soil samples submitted for analysis.

10.2.6 OCP & OPP

Concentrations of OCP/OPP were reported below the laboratory LOR and hence below the adopted soil assessment criteria in all soil samples submitted for analysis.

10.2.7 ASBESTOS

No asbestos was detected in all soil samples submitted for identification analysis.

10.3 Soil Analytical Results (NEPM D – Commercial/Industrial)

A summary of the soil analytical results can be found in **Table 2, Appendix C**. The following section outlines the key findings of the comparison between laboratory results and the site assessment criteria. Discussion of analytical results is provided in **Section 11.2**. The below summary depicts only exceedances of HSL-D, CRC Care and management limits for commercial industrial land use criteria as explained in **Section 10.2** above.

Soil sample locations are presented on **Figure 2, Appendix A**.

10.3.1 BTEX

Concentrations of BTEX were reported below the adopted soil assessment criteria in all soil samples submitted for analysis.

10.3.2 TRH

Concentrations of TRH were reported below the adopted soil assessment criteria in all soil samples submitted for analysis expect for exceedances of management limits for commercial industrial land use. The following locations exceeded the relevant criteria for TRH C_{16}-C_{34} (F3) – 5,000 mg/kg.

- BH38_0.15 (12,000 mg/kg), BH40_0.25 (5,900 mg/kg), BH45_0.2 (12,000 mg/kg).

10.4 Acid Sulfate Soil Assessment

As the site has been identified as being within a Class 5 Acid Sulfate Soil (ASS) zone and a two-three level basement is proposed at the site, chromium reducible sulfur (CrS) suite analysis was undertaken on selected samples and the results have been compared against the *Action Criteria* from Table 4.4 in the ASSMAC (1998) as well as the NASS (2018). It is noted that the predominant soil type encountered during the intrusive investigation works at the site was sandy clay, therefore 'medium texture – sandy loams to light clays' material type has been adopted.

Laboratory analytical results for CrS compared to the adopted *Action Criteria* is presented in **Table 13** below as well as attached in **Table 5, Appendix C**.

Table 13. ASS/PASS Assessment Summary

SAMPLE ID	ACTION CRITERIA (>1000 TONNES) FINE TEXTURE MATERIAL		COMMENT
	SULFUR TRAIL (% S)	ACID TRAIL (MOL H^+/t)	
	0.03	**18**	
BH02_2.0	0.0070	<5	Samples BH02_3.0, BH05_2.0, BH31_5.0 exceeded the action criteria for acid sulfate soil assessment.
BH02_3.0	**0.035**	**22**	
BH05_3.0	**0.093**	**58**	
BH05_4.0	0.027	17	
BH09_2.0	0.012	7.5	
BH09_4.0	<0.005	<5	
BH09_5.0	0.011	6.8	
BH12_4.0	<0.005	<5	
BH12_5.0	0.0060	<5	
BH15_3.0	<0.005	<5	
BH15_4.0	0.013	8.0	
BH28_3.0	0.013	8.2	
BH28_4.0	0.026	16	
BH31_4.0	0.018	12	
BH31_5.0	**0.077**	**48**	

As it is assumed that the mass of potential ASS impacted by the proposed development will be greater than 1000 tonnes, therefore that criteria category has been compared to the results for the site in the table above. The results of the ASS assessment indicate that select soils on site are potential/actual acid sulfate soils based on the ASSMAC action criteria exceeding one or both comparable criteria.

To confirm the source of acidity onsite is from inorganic sulfide compounds and therefore PASS/ASS, CRS methodology was completed. The NASS (2018) outlines that soils with a reducible inorganic sulfur concentration of 0.01% w/w is classed as acid sulfate soil. BH05_3.0 and BH31_4.0 exceeded the 0.01% criterion, both having

concentrations of 0.02% w/w and therefore confirming the presence of acid sulfate soils onsite. Soils at BH31_5.0 also have concentrations of retained acidity greater than ASSMAC action criteria and therefore the potential to create additional inorganic sulfur-based acidity with disturbance of these soils. An acid sulfate soils management plan will therefore be required for the site prior the commencement of excavation works.

10.5 Preliminary Waste Classification

The above results have highlighted contamination of near surface soils in several areas of the site. As the proposed development will result in the disposal of these soils to a licensed waste facility, proper classification under the NSW EPA NSW (2014) Waste Classification guidelines is required. All soils samples were compared to CT1 & CT2 criteria for preliminary waste classification without Toxicity Characteristic Leaching Procedure (TCLP). Select samples from areas where CT criteria was exceeded for select contaminants, specifically TRH, PAHs and metals were then assessed for leachable content so SCC1/TCLP1 & SCC2/TCLP2 classification could additionally be utilised for classification. The results of the analysis can be summarised as follows.

Results of TCLP analysis of onsite contaminants indicated low leachability and as such TCLP1 for leachable content was not exceeded at any selected location. However, due to the total concentrations of contaminants in near surface soils in several hot spots across the site, SCC1 and SCC2 criteria were exceeded. Therefore, several locations onsite will be classified as restricted and hazardous waste, these are summarised as the following:

Restricted solid waste:

- BH38_0.15 - TRH (F2) 13,000 mg/kg, exceeds SCC1 (10,000mg/kg).
- BH45_0.2 – TRH (F2) 13,000 mg/kg, exceeds SCC1 (10,000mg/kg).

Hazardous solid waste:

- BH38_0.15 – B(a)P 250 mg/kg, exceeds SCC2 (23mg/kg).
- BH40_0.25 – B(a)P 140 mg/kg, exceeds SCC2 (23mg/kg).
- BH45_0.2 – B(a)P 79 mg/kg, exceeds SCC2 (23mg/kg).

The remainder of samples were classified as **General Solid Waste (non-putrescible)**. Results of waste classification can be found in **Table 9 & 10 in Appendix C**, exceedances of waste classification guidelines are outlined in **Figure 3c, Appendix A**.

10.6 Groundwater Analytical Results

A summary of the groundwater analytical results compared to the site assessment criteria can be found in **Table 3, Appendix C**. This section outlines the key findings of the comparison between laboratory results and the site assessment criteria as summarised in the subsections below.

10.6.1 METALS

Concentrations of metals were reported below the adopted assessment criteria in the majority of groundwater samples submitted for analysis, with the following exceptions:

- Zinc concentrations above adopted criteria – ANZG 2018 95% protection of marine species (15 µg/L) at the following locations
  - EW1 (26 µg/L), EW2 (43 µg/L), MW01 (38 µg/L), MW02 (160 µg/L), MW03 (170 µg/L), MW04 (120 µg/L), MW05 (DUP1) (18 µg/L) MW07 (89 µg/L), MW08 (58 µg/L).
- Copper concentrations above adopted criteria – ANZG 2018 95% protection of marine species (1.3 ug/L) at the following locations
  - MW01 (4 µg/L), MW02 (5 µg/L), MW03 (2 µg/L), MW07 (2 µg/L) and MW08 (2 µg/L).

10.6.2 TOTAL RECOVERABLE HYDROCARBONS (TRH)

Concentrations of TRHs were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

Notable detections of TRH above the laboratory limit of reporting were noted in the following samples:

– MW02 and MW03, with these wells installed in the footprint of a previous tank pit location.

10.6.3 BENZENE, TOLUENE, ETHYLBENZENE, XYLENE AND NAPHTHALENE (BTEXN)

Concentrations of BTEXN were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

10.6.4 POLYCYCLIC AROMATIC HYDROCARBONS (PAH)

Concentrations of PAHs were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

10.6.5 PHENOLS

Concentrations of phenols were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

10.6.6 POLYCHLORINATED BIPHENYLS (PCB)

Concentrations of PCBs were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

10.6.7 ORGANOCHLORINE & ORGANOPHOSPHOROUS PESTICIDES (OCP & OPP)

Concentrations of OCP& OPPs were reported below the adopted assessment criteria and laboratory detection limit in all groundwater samples submitted for analysis.

10.6.8 PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)

Concentrations of PFAS were reported below the adopted assessment criteria in all groundwater samples submitted for analysis. Several detections of PFAS compounds were detected at MW03 including detections of PFOS however concentrations were below the 99% interim marine guidelines.

10.6.9 VOLATILE ORGANIC COMPOUNDS (VOC)

Concentrations of VOCs were reported below the adopted assessment criteria in all groundwater samples submitted for analysis.

10.7 Hazardous Ground Gas Monitoring

Landfill gas readings were obtained from the newly installed converted soil bore locations (MW01-MW08) over two (2) monitoring rounds, completed on 19 December 2022, and 1 March 2023.

Atmospheric conditions prior to and during monitoring events was obtained from the Sydney Olympic Park weather station (ID 95765), located approximately 3.1 km northwest of the site (closest weather station). A summary of atmospheric conditions prior to a during monitoring events is presented in **Table 14** below, weather station data is also provided in **Appendix G** from Sydney Observatory Hill due to the absence of local weather data.

Table 14. Summary of Atmospheric Conditions

ITEM	CRITERIA	ROUND 1 19 DEC 22	ROUND 2 1 MAR 23	COMMENTS
Rainfall	Not saturated	0.0 mm	0.0 mm	Minimal rainfall was present in the three days prior to sampling, additionally no rainfall was recorded during the sampling events.
Rainfall *3 days prior*		0.2 mm	1.2 mm	
Barometric pressure	<101.3 kPa and Declining	to 102.4 kPa to 102.0 Declining	99.8 to 100.6 kPa Rising	Instrument recorded barometric pressure is reported as no nearby weather station provided atmospheric pressure for the months of sampling. Sampling that occurred in the month of December occurred during high pressure and

ITEM	CRITERIA	ROUND 1 19 DEC 22	ROUND 2 1 MAR 23	COMMENTS
				therefore does not provide the most reliable data for the assessment of hazardous ground gas under a worst-case scenario. Analysis was therefore repeated in the month of March during low pressure. Although atmospheric pressure was rising during the March sampling round the repeated results between the two sampling rounds provides confidence of the presence of hazardous ground gas onsite.
Windspeed	<10km/hr	-	-	Not measured during landfill gas monitoring events. Wind gust measured at Sydney Olympic Park are not considered applicable to the site.
Temperature	-	13.3 to 20.7 °C	207 to 29.6 °C	-

Hazardous ground gas readings obtained during the monitoring events completed are presented in **Table 15** below. It is noted that only stabilised readings (final readings) recorded during each monitoring event are presented. A copy of the landfill gas monitoring field sheets is provided in **Appendix G.**

Table 15. Hazardous Ground Gas Monitoring Summary

LOCATION	DATE	CH_4 (%)	CO_2 (%)	O_2 (%)	LEL[1] (%)	FLOW (L/hr)	ATMOSPHERIC PRESSURE (mbar)
CRITERIA		1.0 % [2]	1.5 % [2]	-	5 % [3]	-	-
MW01	19 Dec 22	0.0	0.1	20.5	0.0	0.1	
	1 Mar 23	0.0	3.5	16.9	-	0.1	
MW02	19 Dec 22	0.0	11.5	17.7	1.3	0.1	
	1 Mar 23	0.1	10.0	15.4	-	**23.8**	
MW03	19 Dec 22	0.4	13.2	16.2	**10.1**	0.1	
	1 Mar 23	0.2	**15.1**	13.4	-	10.7	
MW04	19 Dec 22	0.0	4.8	18.8	0.0	0.1	
	1 Mar 23	0.0	2.3	17.8	-	20.3	
MW05	19 Dec 22	0.0	8.8	15.4	0.0	0.1	
	1 Mar 23	0.0	4.5	16.8	-	18.4	
MW06	19 Dec 22	0.0	9.4	15.7	0.0	0.1	
	1 Mar 23	-	-	-	-	-	
MW07	19 Dec 22	0.0	10.4	13.2	0.0	0.1	

LOCATION	DATE	CH_4 (%)	CO_2 (%)	O_2 (%)	LEL[1] (%)	FLOW (L/hr)	ATMOSPHERIC PRESSURE (mbar)
CRITERIA		1.0 % [2]	1.5 % [2]	-	5 % [3]	-	-
MW08	1 Mar 23	0.0	12.7	4.6	-	0.1	
	19 Dec 22	0.0	6.8	14.3	0.0	0.1	
	1 Mar 23	0.0	13.1	7.6	-	0.1	

[1] LEL – Lower explosive limit.

[2] Trigger values from NSW EPA Environmental Guidelines: Solid waste landfills (NSW EPA, 2016).

[3] % v/v in air, NSW EPA (2020) Contaminated Land Guideline for the Assessment and Management of Hazardous Ground Gases.

The maximum gas concentration (methane or carbon dioxide) recorded at the site was 15.1% carbon dioxide, at MW03 on 1 March 2023. The maximum bore flow rate recorded at the site was 23.8 L/hr.

This results in a GSV for the site of 3.59 (15.1/100 x 23.8), which classifies the site as **Characteristic Situation 1 – Moderate to high risk** using the Modified Wilson and Card classification adopted by the NSW EPA (2020) Assessment and management of hazardous ground gases guidelines.

Concentrations of carbon dioxide ranged from 2.3-15.1 % v/v and was the predominate gas at all sampling locations. Methane concentrations across the site were low between 0.0-0.4% v/v across the two sampling events. In addition to above gases, hydrogen sulfide and carbon monoxide was also recorded in several locations for the two sampling rounds. The highest concentration of carbon monoxide and hydrogen sulfide was reported at MW03 on the 19th of December reporting concentrations of 214 ppm for carbon monoxide and 25 ppm for hydrogen sulfide.

Discussion of the hazardous ground gas monitoring results in the context of the proposed development is provided in **Section 11.4**.

10.8 Soil Vapour Analytical Results

A summary of the soil vapour analytical results can be found in **Table 4, Appendix C**. The following section outlines the key findings of the comparison between laboratory results and the soil vapour assessment criteria (SVAC). Discussion of soil vapour analytical results is provided in **Section 11.5**. Soil vapour sample locations are presented on **Figure 2, Appendix A**.

10.8.1 VOCS

Concentrations of VOCs were reported below the adopted SVAC in both samples submitted for analysis, except for concentrations of 1,2,4-trimethylbenzene at MW01. Due to the absence of guideline values within Australian legislation US EPA RSLs for residential and industrial area were adopted for several VOCs for soil gas. An exceedance of residential air RSLs was reported for this location.

10.8.2 BTEX

Concentrations of BTEX were reported below the adopted SVAC in both samples submitted for analysis.

10.8.3 TRH

Concentrations of TRH were reported below the adopted SVAC in both samples submitted for analysis.

10.8.4 PAH

Concentrations of PAH (naphthalene) were reported below the adopted SVAC in both samples submitted for analysis.

10.8.5 SOLVENTS

Concentrations of solvents were reported below the adopted SVAC in both samples submitted for analysis.

10.9 Extent of Uncertainties in the Results

The sampling methodologies used by Reditus during this investigation has been designed to limit uncertainty in the results. Reditus is confident that the results of this investigation give an accurate representation of the current status of the site but note that in all subsurface investigations the potential remains for variability between sampling points and for conditions to be different onsite from the conditions reported herein.

11 Discussion

11.1 Extent of Previous Investigations and Remedial Works – ASA (1995-1996)

Review of previous reports highlighted extensive investigative works that occurred in both 1994 and 1995 by DP and ASA respectively. The conclusions of the reports highlighted elevated levels of heavy metals across the site as well as PAHs, OCPs and asbestos in hot spot locations. As accessible soils within the building footprint was limited to accessible subfloor space within the current investigation, review of laboratory results from past investigations helped to improve knowledge of COPCs in these areas. The record of the Douglas Partners report was incomplete with no sample location figure appended to the available reports, hence the laboratory results of the ASA report have only been assessed. It should be noted, results of the Douglas Partners investigation showed comparable results to ASA (i.e. comparable concentrations of particular contaminants).

ASA completed a systematic assessment of the site across 88 shallow boreholes which provided sufficient coverage for site characterisation. Review of analytical results was performed and compared to current guidelines. Exceedances from this previous investigation of relevant tier 1 health and ecological guidelines were mainly located in the southeast corner and southern boundary of the site along the rail corridor, exceedances in the western carpark, the landscaped and hardstand areas of the north and northeast of the site as well as within the footprint of the main warehouse were also reported.

A remedial action plan by ASA (1996) was created for the site, however the absence of an associated site validation, with the exception of tank validation report, creates ambiguity over the extent of the works performed prior to the renovation of infrastructure and use as a Westpac facility. It can be assumed that no remedial works were performed within the main building as no demolition of the metalworks warehouse occurred and infrastructure was reused for the current land use. Therefore, contaminant concentrations within this footprint are inferred at present day to be comparable to results documented in 1995 by ASA and additional boreholes completed by Reditus during this investigation.

During works between 1996 and 1998, construction of an on grade multistorey carpark was built at the southern boundary of the site. During these works removal of fill soils is inferred to have occurred confirmed by bore logs from the current investigation, removing the source of heavy metal and asbestos contamination highlighted in previous reports. The results of analysis from the current investigation indicates no exceeding metal concentrations or asbestos detections along the southern boundary of the site confirming that exceeding soils in these areas were removed prior to the construction of the current carpark infrastructure. The remedial extent of the remaining landscaped garden and hardstand areas are unknown with no major changes to these areas noted between the two site uses. It has been assumed to have been left unaltered from what was reported in 1995. Laboratory results of the current investigation also helps to corroborate this opinion. ASA (January 1995) noted a layer of coal ash in the northwest section and western carpark which required further characterisation. Samples taken from these areas in the current investigation in several spots exceeded criteria for PAH and had a strong correlation to coal ash from black and brown coal when assessed with 'PAH Source Analyst' which can be found in **Appendix E.** Further, despite the construction of an asphalt carpark on the south-eastern boundary of the site and some cutting of soils evident upon site inspection, concentrations of copper in several locations still exceeded EILs during this investigation indicating some contaminant load has remained onsite after the carpark construction. As such it is inferred that the majority of the site outside of the main building footprint also remains unchanged or minimally altered from a contamination perspective since industrial metal working land use that occurred until 1994.

Result of the previous ASA (1995) are attached in **Appendix I.**

11.2 Soil

11.2.1 HEALTH INVESTIGATION LEVELS

The results of the laboratory analysis indicate that concentrations of contaminants of potential concern in each soil sample submitted for analysis were reported below the applicable adopted NEPC (2013) NEPM HIL-B guidelines, with exception of benzo(a)pyrene and total PAH concentrations (sum of positives) in this investigation and heavy metals in previous investigations by ASA (January 1995). Exceedances of the current investigation were noted at BH08, BH38,

BH40 and BH45 and all exceedances were recorded in shallow samples (0-0.5m bgl). With the exception of BH08, all soils with elevated concentrations of PAH compounds are presumed to be removed with the proposed development (basement carpark) due the centralised location of these sampled soils. If these soils are to remain onsite in the context of the proposed development, then they will be address accordingly in subsequent reports as they are not suitable for the proposed development. BH08_0.1 marginally exceeded the adopted criteria health investigation criteria for B(a)P. It is considered that concentrations reported at this location are not indicative of B(a)P concentrations in fill soils within open hardstand and landscaped areas of the site. No other exceeding concentrations outside the building footprint were reported, it is therefore considered to be an outlier of site conditions. Reditus considers that soils in these areas present low risk to future site workers and occupants due to the marginality of the exceedance. Further, the exceeding concentrations were reported at the 0.1m near surface sample and no underlying elevated PAH concentrations were found within deeper samples. During construction of the proposed development, it is thought that the near surface soils will be removed during grading of the site removing the residual contamination. Therefore, soils in this area are considered suitable when compared to health investigation criteria.

ASA (1995) also reported exceedances of heavy metal health investigation criteria adopted for this site. These exceedances were primarily located along the southeast corner of the site with exceedances of lead criteria at BH30_0.6m and copper at BH31_0.4m. An exceedance of lead criteria was also identified at BH53 and 0.4 and 0.8m bgl in the northwest corner of the current commercial building. The exceeding concentrations at BH30 and BH31 are potentially still in-situ within the carpark area. Such concentrations were not detected during the current investigation. At the time finalised plans are provided for the site, if these areas are to remain in-situ, further testing may be warranted to determine the presence or absence of such soils. Soil in the locality of BH53 from the ASA investigation is inferred to be removed during excavation works onsite.

11.2.2 HEALTH SCREENING LEVELS FOR VAPOUR INTRUSION

The results of the laboratory analysis indicate that concentrations of contaminants of potential concern in each soil sample submitted for analysis were reported below applicable adopted NEPC (2013) NEPM HSL-B & HSL-D guidelines for vapour intrusion except for concentrations of TRH C_{10}-C_{16} (F2) at BH38_0.15 and BH45_0.2 when compared against HSL-B criteria for soils 0-1m bgl. It is presumed that soils at these locations will be removed with the proposed development and therefore will not present a risk to site occupants under future land use scenarios. Further, due to the construction of communal basement car parking, HSL-D would more appropriately characterise soils at BH38 and BH45 from a tier 1 health screening perspective, these concentrations do not exceed HSL-D criteria. Concentrations of TRH have been compared conservatively against HSL-B criteria due to the absence of finalised plans for the proposed development. If these locations are omitted from the excavation extent onsite and hence are outside the basement footprint further management of soils within these locations may be required. No exceedances of HSLs from ASA 1995 reports were noted upon revision of laboratory results.

11.2.3 MANAGEMENT LIMITS

The results of the laboratory analysis indicate that the concentrations of contaminants of potential concern in soil at each sample location were reported below applicable adopted NEPC (2013) NEPM ML for residential/parkland and commercial/industrial guidelines with the exception of TRH C_{16}-C_{34} (F3) at BH38, BH40 and BH45 within shallow fill materials. These locations exceeded both land use criteria values at all locations. Review of concentrations in deeper samples from these locations indicated no further exceeding concentrations and therefore ML exceedances were limited to the near surface. It is inferred that fill material in this area will be removed to facilitate the construction of proposed development basement carparking, hence removing the source of contamination. If these soils remain in-situ with the proposed development, then it will likely warrant the creation of a site-specific management plan. No exceedances of MLs from ASA 1995 reports were noted upon revised of laboratory results.

11.2.4 DIRECT CONTACT HSL (INTRUSIVE MAINTENANCE WORKER)

The results of the laboratory analysis indicate that concentrations of contaminants of potential concern in each soil sample submitted for analysis were reported below applicable adopted CRC Care (2011) Direct Contact HSL-D guidelines.

11.2.5 ECOLOGICAL SCREENING LEVELS

Exceedances of the NEPM (2013) ESLs for urban residential land use were reported for TRH (F2 & F3) and PAHs (specifically B(a)P). Several of the exceeding concentrations were recorded within the central portion of the site and therefore will be set for excavation under the proposed development. The only exceedance of TRH outside the inferred basement extent was located at BH14_0.1. Exceeding concentrations of B(a)P were also found in several

locations across the site. To further understand the nature of PAH exceedances and there specific phytotoxicity, PAH results were input into 'PAH Source Analyst' found in **Appendix E.**

'PAH Source Analyst', an online program designed by Environmental Earth Sciences International. PAHs are one of the most ubiquitous contaminants and occur both naturally and through anthropogenic processes. PAHs generally form through petrogenic processes, being found naturally in fossil fuels, and through pyrogenic processes, either as gas condensates from the heating of fossil fuels (e.g. those associated with tar and creosote) or as pyrogenic residues from the incomplete combustion of carbon-based materials (such as those associated with coke and ash). Understanding the source of PAHs is important for understanding their likely mobility and availability in the environment. These in turn affect both the associated risk but also the bioremediation potential of the substance. PAH Source Analyst provides a tool for comparison of an unknown PAH analytical result with a database of known PAH bearing substances. The results of the PAH Source Analyst suggest that the PAH (specifically benzo(a)pyrene is likely coke or ash (from black or brown coal). Refer to **Appendix E** for PAH Source Analyst output calculations. Ash and coke form strong bonds with soil matrices and have a very low bioavailability.

For low reliability ESLs (PAHs and TRH) the toxicity database meets the minimum data requirements for the species sensitive distribution approach but contains modelled toxicity data (that is, from QSARs - quantitative structure-activity relationship, QAARs - quantitative activity-activity relationship, or the equilibrium partitioning method) or ecologically less relevant end points (e.g. biomarker end points). For organic contaminants with low reliability ESLs, the ESLs are only as good as the QSARs and QAARs they were derived from, which in this case are of reasonable to poor quality.

Reditus are satisfied that despite the identified ESL exceedances, that concentrations of PAH and TRH will not affect plant growth on the site for the following reasons:

- The use of the ESL has significant limitations because the relationship between soil and plant species is highly complex and variable.
- The existing vegetation onsite where present shows no visible signs of stress or phytotoxicity.
- The ESLs presented in the NEPM (2013) are very conservative values for plant growth and are developed primarily to be protection of soil micro-organisms.
- The high density residential/commercial development will likely result in a majority of the site being covered by buildings slabs and roads.
- Plants produce their own organic matter around root zones. This organic matter helps protect the plants from direct exposure to hydrocarbons in soils by binding with these contaminants. In addition, any landscaping works following the development will involve the importation of topsoil to act as a growing medium for plants and to supply sufficient nutrients for healthy plant growth. This topsoil will contain organic material that will limit the bioavailability (that is the proportion of contaminant concentrations that are available for uptake by plants or humans) of hydrocarbons and PAH.

For the reasons given above, Reditus is satisfied that the soil can remain onsite without posing an undue risk to site environment when compared to ecological screening criteria.

11.2.6 ECOLOGICAL INVESTIGATION LEVELS

The results of the laboratory analysis indicate that concentrations of contaminants of potential concern in each soil sample submitted for analysis were reported below applicable adopted NEPC (2013) NEPM generic EIL guidelines for Urban Residential and Public Open Space except for heavy metal exceedances that were noted in this current investigation and during the ASA 1995 investigation. Copper EIL exceedances were reported at Reditus boreholes at BH13, BH14, BH17 and BH19 located in the southeast carpark as well as BH33 and BH45 which are located at the western perimeter of the site and within the building footprint respectively. ASA also recorded several exceedances of copper, lead and zinc. These were primarily found at south and south-eastern boundaries of the site and hence in part have been removed during carpark construction and have been recharacterised by laboratory results from this current investigation. However, concentrations were also found in the northern and north-eastern areas of the site within hardstand and landscaped gardens.

Reditus considers that ecological criteria in the context of a high-density residential development only apply to accessible soils in landscaped garden areas. Therefore, at the time that finalised plans are formulated for the site, ecological heavy metal exceedances will need to be compared to plans for deep soil zones and landscaped garden beds onsite. If exceedances are located within such location's removal of exceeding soils and importation of clean growing medium may be warranted to meet site suitability from an EIL perspective.

11.2.7 SUMMARY OF SITE SUITABILITY

Concentrations of COPCs onsite were primarily found below the adopted SACs with exception of PAH primarily B(a)P and TRH (F2 & F3) and metal results. Based on the proposed development the majority of exceedances that were identified onsite, found within shallow fill soils are inferred be removed due to the construction of communal basement parking and high-density residential infrastructure. Exceedances located along the perimeter of the property or those that fall outside the extent of the proposed basement design will need to be addressed in remedial strategies proposed for the site and may be subject to excavation and/or further analysis. It is recommended that at the time demolition of existing infrastructure occurs, further testing of fill soils in the central areas of the site occurs to corroborate data from the previous ASA investigation.

11.2.8 PRELIMINARY WASTE CLASSIFICATION

Results of the preliminary waste classification indicated that select soils onsite would exceed general solid waste (GSW) criteria and as such would need to be stockpiled and disposed of separately to a suitable waste facility. As detailed in section 11.2.7 above, further sampling in the building footprint is recommended. At this point further characterisation of soils around the waste classification exceedances is required to delineate the extent of impacted material. It is likely that the exceedance of TRH (F2) at BH38 and BH45 is an outlier of TRH concentrations onsite and the 95% upper confidence limit of TRH (F2) in fill soils onsite will fall below the SCC1 classification and therefore soils at BH38 and BH45 will be suitable for disposable as GSW, this will be dependent on further testing in these localities. However, B(a)P concentrations at BH38, BH40 and BH45 reported concentrations greater than 2.5 times the exceedance criteria (i.e. 95% UCLs cannot be adopted). As such, these samples will have to be handled as hazardous solid waste and disposed of accordingly due to the statistical significance of the exceedance.

11.3 Groundwater

Concentrations of contaminants in groundwater compared to the GACs were primarily below the adopted criteria.

The results of the laboratory analysis indicate that the concentrations of the contaminants of potential concern in groundwater at each sample location were below adopted NEPC (2013) HSL-B and HSL-D assessment criteria for vapour intrusion. Monitoring wells were installed to target the existing and former USTs onsite, and the site generally. The results of soil and groundwater analysis indicate that no gross contamination from previous or existing underground storage tanks exists onsite and historical site use, and remedial action pertaining to USTs onsite will be limited to the proper removal and disposal of the infrastructure prior to redevelopment.

Concentrations of COPC in groundwater were below the adopted ANZG (2018) DGV for 95% protection of marine water except for several concentrations of heavy metals (copper and zinc). As the area surrounding the site is highly urbanised with adjacent rail corridor and soil heavy metal exceedances from the 1995 ASA report predominantly along the rail corridor additional contaminant load is also being generated from offsite sources and more generally as a result of ambient urbanised groundwater conditions. As part of previous works onsite fill soils containing elevated heavy metal concentrations at the southern boundary of the site were removed to facility the construction of the multistorey carpark. The concentrations of copper and zinc reported in upgradient monitoring wells (MW02, MW03 and MW04) is higher than concentrations report in downgradient monitoring wells (MW07 and MW08) indicating that there is no net gain of heavy metals and the site is not having a negative effect on groundwater from a contamination perspective. Additionally, the proposed development will see the majority of fill soils onsite removed to facilitate the proposed development. As such the source of contamination will be removed from site removing future contaminant load from being added to the onsite shallow groundwater aquifer.

All other COPC were below the adopted criteria including PFAS concentrations from selectively sampled wells.

11.4 Hazardous Ground Gas

The site is located in proximity to potential sources of hazardous ground gas, and it is inferred that the results of monitoring performed onsite are as a result of urban conditions within the area of Concord West and not as a result of onsite contamination i.e. UST infrastructure (present/former). The inferred potential sources are the nearby mangrove and swamp environments surrounding Powells Creek as well as former Bi-Centennial Park land fill sites outlined in **Reditus (2022)** PSI.

The maximum gas concentration (methane or carbon dioxide) recorded at the site was 15.1% carbon dioxide, at MW03 on 1 March 2023. The maximum bore flow rate recorded at the site was 23.8 L/hr which results in a risk score of **moderate to high risk** based on the Modified Wilson and Card classification adopted in the NSW EPA (2020)

Assessment and management of hazardous ground gas guidelines. Flow was encountered in areas where present or former UST infrastructure was located, to facilitate this infrastructure (installation and decommissioning of USTs) earthworks and disruption of soil strata occurs creating a pathway for gas migration and therefore it is inferred that during bulk earthworks for the proposed development disruption of unconsolidated strata on site will lead to the formation of further pathways for hazardous ground gas migration. Mitigation measures are therefore recommended for the proposed development to negate the potential onsite risks posed by hazardous ground gas.

In the context of the proposed development, mixed used commercial/residential development with basement carparking it is recommended that ground gas infrastructure is installed to divert and suppress pathways from the subsurface to future onsite infrastructure and occupants. Reditus assumes that the lower levels of the development will be utilised for basement carparking and then commercial spaces on the immediate ground floor. Therefore, based on a CS score of '4' Table 8 of the NSW EPA guidelines suggests the installation of 4 mitigation measures. The following measures could be installed as part of the proposed development:

- Polypropylene formers create sub slab voids utilised in conjunction with a venting system (passive/active).
- Vented sumps utilising a drainage layer in the sub slab space (applicable due to prospective basement design).
- Active gas extraction wells, which could utilise carpark venting infrastructure to release hazardous ground gas from confined spaces.
- Reinforced and sealed slab design.
- Active monitoring of gas concentrations in confined spaces.

11.5 Soil Vapour

The results of the soil gas assessment reported all CoPC below the adopted criteria apart from 1,2,4 trimethylbenzene at MW01 based on adopted US EPA RSLs for residential air. Inspection of the groundwater VOC results indicates the absence of any detections across the eleven assessed monitoring wells. This suggests that the VOC concentrations found at MW01 are likely sourced from contamination within the soil matrix where detections of VOCs across the site were found. MW01 was placed in the footprint of the previous diesel UST at the northwest corner of the site and therefore the exceedance of 1,2,4 trimethylbenzene is inferred to have resulted from the degradation of fuels from previous diesel storage. The exceedance of the relevant RSLs is considered a low risk exceedance of the adopted criteria and doesn't present undue health risks to the future site workers or occupants due to the marginality of the exceedance. Further, the location of MW01 at the perimeter of the site is inferred to be outside the extent of the future building footprint further marginalising any health risk due to the exchange of soil gas and open air. At the time demolition works are completed at the site further assessment of any soil vapour risk will be assessed in central areas of the site to confirm such conclusions prior to construction of basement carparking and associated commercial and residential land usage.

12 Refined Conceptual Site Model

Based on the results of the investigation and the preliminary CSM presented in **Section 5** has been refined to identify complete and potential pathways between the known or potential source(s) and the receptor(s).

Table 16. Refined Conceptual Site Model

SOURCE	EXPOSURE PATHWAY	RECEPTOR	EXPOSURE
Bulk underground fuel storage *Potential spills and leaks from UPSS*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off. • Extraction/discharge of potentially contaminated groundwater	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Unlikely** Results of soil and groundwater analysis found no exceeding concentrations of TRH, BTEX and associated VOCs in the footprint of previous or existing USTs except marginal VOC exceedances at MW01.
Historical use of fill *Importation of fill from unknown sources.*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off.	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Exceedances of health and ecological screening criteria were noted onsite within assessed fill soils.
Historical industrial land use *Spills, leads, and deposition of contamination from historical land uses both on and surrounding the site*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off. • Extraction/discharge of potentially contaminated groundwater	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Possible** Exceedances of health and ecological screening criteria were noted onsite within shallow soils.
Hazardous Building Materials *Improper demolition of previous structures or weathering of existing hazardous building fabrics*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off.	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Unlikely** No asbestos containing material was identified in fill soils onsite. However due to the age of onsite infrastructure a hazardous building material survey is warranted for the site.
Electrical substation and transformer *Leakage of PCBs containing insulating fluid*	• Direct contact with contaminated soil. • Inhalation of dust and/or vapour. • Surface water run-off.	• Site Users/Occupants. • Construction Workers. • Maintenance workers. • Offsite receptors.	**Unlikely** PCBs were not identified in soil or groundwater results in the current or previous investigations.

13 Conclusions and Recommendations

The following conclusions and recommendations are made based on the key findings of the DSI.

13.1 Conclusions

Based on a review of the site history, observations made during fieldwork, results of laboratory analysis and the proposed land use scenario, Reditus concludes the following:

- Exceedances of health and ecological criteria were reported from the results of the current and previous investigations and are inferred to have resulted from previous industrial land usage and bulk underground fuel storage onsite.
- The majority of soil exceedances of the previous ASA investigations were reported in the southern and southeast boundary of the site.
- Exceedances found within this investigation were located primarily in the central areas of the site as well as the south-eastern boundary.
- Remedial works performed between 1994 and 1996 were limited to the proper removal and validation of UST infrastructure and tank pits onsite.
- As a result of the construction of on grade multistorey carparking onsite and cutting of topography to create the asphalt carpark on the southern and south-eastern boundary of the site, contaminant load has been removed or reduced in these localities.
- The footprint of the building from a chemical perspective is inferred to be unaltered from what was classified by the ASA 1995 study and the selective boreholes performed by Reditus.
- Results of hazardous ground gas investigation however produced a CS score of 3.59 placing the site in the moderate to high-risk category. Due to these findings a management plan is warranted in the context of the proposed development.
- Potential acid sulfate soils have been identified on site and the formulation of an acid sulfate soils management plan is warranted.
- It is concluded that the site can be made suitable for the proposed development, however further testing and remedial works will be required to facilitate the proposed development. Including the removal of current UST infrastructure.

13.2 Recommendations

Based on the findings of the investigation, Reditus recommends the following to make the site suitable in the context of the proposed development.

- Additional testing is warranted for the site at the time demolition of existing structures is performed and greater access to the central areas of the site is gained. This will provide great confidence from a chemical perspective of soils in the central areas of the site and confirm investigative works by ASA. Such investigation may also include further monitoring well locations (gas/groundwater), to confirm the absence of a vapour risk from previous land usage (i.e. TCE baths) and further characterise hazardous ground gas conditions onsite.
- A remedial action plan will be warranted for the removal of UST infrastructure identified onsite and areas of fill in exceedance of land use criteria that will remain onsite. This will be performed after a review of the finalised design for the site is performed.
- A management plan will be required for the site based on the results of the hazardous ground gas assessment.
- A management plan will be required for the site due the presence of potential acid sulfate soils.
- A pre-demolition hazardous building material survey (HAZMAT) is recommended for the site prior to the demolition of onsite infrastructure given the age of onsite infrastructure.

14 Limitations

This report has been prepared in accordance with the scope of services described in the **Section 1.2**. The letter has been prepared for the sole use of the client and has been prepared in accordance with a scope of work agreed by the client.

The report or document does not purport to provide legal advice and any conclusions or recommendations made should not be relied upon as a substitute for such advice.

The report does not constitute a recommendation by Reditus for the client or any other party to engage in any commercial or financial transaction and any decision by the client or other party to engage in such activities is strictly a matter for the client.

The report relies upon data, surveys, measurements and results taken at or under the Site at particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the client. Furthermore, the report has been prepared solely for use by the client and Reditus accepts no responsibility for its use by other parties. The client agrees that Reditus' report or associated correspondence will not be used or reproduced in full or in part for promotional purposes and cannot be used or relied upon by any other individual, party, group or company in any prospectus or offering. Any individual, party, group or company seeking to rely on this report cannot do so and should seek their own independent advice.

No warranties, express or implied, are made. Subject to the scope of work undertaken, Reditus assessment is limited strictly to identifying typical environmental conditions associated with the subject property based on the scope of work and testing undertaken and does not include and evaluation of the structural conditions of any buildings on the subject property or any other issues that relate to the operation of the Site and operational compliance of the Site with state or federal laws, guidelines, standards or other industry recommendations or best practice. Scope of work undertaken for assessments are agreed in advance with the client and may not necessarily comply with state or federal laws or industry guidelines for the type of assessment conducted.

Additionally, unless otherwise stated Reditus did not conduct soil, air or wastewater analyses including asbestos or perform contaminated sampling of any kind. Nor did Reditus investigate any waste material from the property that may have been disposed off-site or undertake and assessment or review of related site waste management practices.

The results of this assessment are based upon (if undertaken as part of the scope work) a site inspection conducted by Reditus personnel and/or information from interviews with people who have knowledge of site conditions and/or information provided by regulatory agencies. All conclusions and recommendations regarding the property are the professional opinions of the Reditus personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability have been made, Reditus assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Reditus, or developments resulting from situations outside the scope of this project/assessment.

Reditus is not engaged in environmental auditing and/or reporting of any kind for the purpose of advertising sales promoting, or endorsement of any client's interests, including raising investment capital, recommending investment decisions, or other publicity purposes. Reditus assumes no responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Reditus, or developments resulting from situations outside the scope of this project.

In relation the conduct of asbestos inspections or the preparation of hazardous materials reports Reditus has conducted inspections and the identification of hazardous material within the constraints presented by the property. Whilst efforts are made to access areas not normally accessed during normal use of the Site to identify the presence of asbestos or other hazardous material, unless explicitly tested no guarantee can be provided that such material is or is not present.

Reditus' professional opinions are based upon its professional judgment, experience, and training. These opinions are also based upon data derived from the limited testing and analysis described in this report or reports reviewed. It is possible that additional testing and analysis might produce different results and/or different opinions or other opinions. Reditus has limited its investigation(s) to the scope agreed upon with its client. Reditus believes that its opinions are reasonably supported by the testing and analysis that has been undertaken (if any), and that those opinions have been developed according to the professional standard of care for the environmental consulting

profession in this area at this time. Other opinions and interpretations may be possible. That standard of care may change and new methods and practices of exploration, testing and analysis may develop in the future, which might produce different results.

15 References

Environmental Planning

NSW Environmental Planning and Assessment Act (the EP&A Act 1979).

NSW State Environmental Planning Policy Number (SEPP) Resilience and Hazards 2021. Superseding SEPP55 – Remediation of Land, 1998.

Site Contamination

CRC Care (2011) Health screening levels for petroleum hydrocarbons in soil and groundwater. Part 1: Technical development document.

NSW Contaminated Land Management Act (the CLM Act 1997).

NSW EPA statutory guidelines made or approved under section 105 of the CLM Act, including:

- *NSW EPA Guidelines for the NSW Site Auditor Scheme (3rd Edition), 2017.*
- *NSW EPA Guidelines for Consultants Reporting on Contaminated Land, 2020.*
- *NSW EPA Sampling Design Guidelines, August 2022.*
- *NSW EPA Guidelines for the Assessment and Management of Groundwater Contamination, 2007.*
- *NSW EPA Guidelines for Assessment and Management of Hazardous Ground Gases, 2020.*

National Environment Protection Council (1999, Revised 2013) National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 – Schedule B1 Guideline on Investigation levels for Soil and Groundwater (NEPC, 2013).

Australian and New Zealand Governments Guidelines for Fresh and Marine Water Quality 2018.

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, 2005.

Australian Standard AS4482.2-1999. Guide to the Investigation and Sampling of sites with Potentially Contaminated Soil. Part 2: Volatile Substances,1999.

PFAS National Environmental Management Plan version 2.0 (the PFAS NEMP 2.0), 2020.

Acid Sulfate Soils

The Acid Sulfate Soil Management Advisory Committee (ASSMAC) Acid Sulfate Soils Assessment Guidelines 1998 (Also referred to as the "Acid Sulfate Soils Manual").

Waste

NSW Protection of the Environment Operations Act (POEO Act) 1997.

NSW Protection of the Environment Operations (Waste) Regulations 2014.

NSW EPA Waste Classification Guidelines, Part 1 Classifying Waste, 2014.

NSW EPA Resource Recovery Order, Excavated Natural Material Order under Part 9, Clause 93 of POEO Waste Regulation 2014 (the ENM Order 2014).

Asbestos

NSW Work Health and Safety Act, 2011 (WHS Act 2011).

NSW Work Health and Safety Regulations, 2017 (WHS Reg 2017), Chapter 8 Asbestos, 2017 (NSW WHS Reg 2017).

NSW EPA Managing Asbestos in or on Soil, 2014 (NSW EPA 2014).

Western Australia Department of Health Guidelines for the Assessment Remediation and Management of Asbestos Contaminated Sites in Western Australia 2009 (WA DoH, 2009) as referred to by NEPM 2013

A

Figures



REDITUS





Map	
22038_rp03_f01_siteloc_v01	
Date of Export	
01/12/2022	
Author	**Approver**
JP	DS
Data Source	
Metromap, Google Maps, Open Street Map, NSW Government	

Legend

- Site Boundary
- Surface Water
- Major Roads
- Railways
- Rivers
- Streams
- Minor Channels

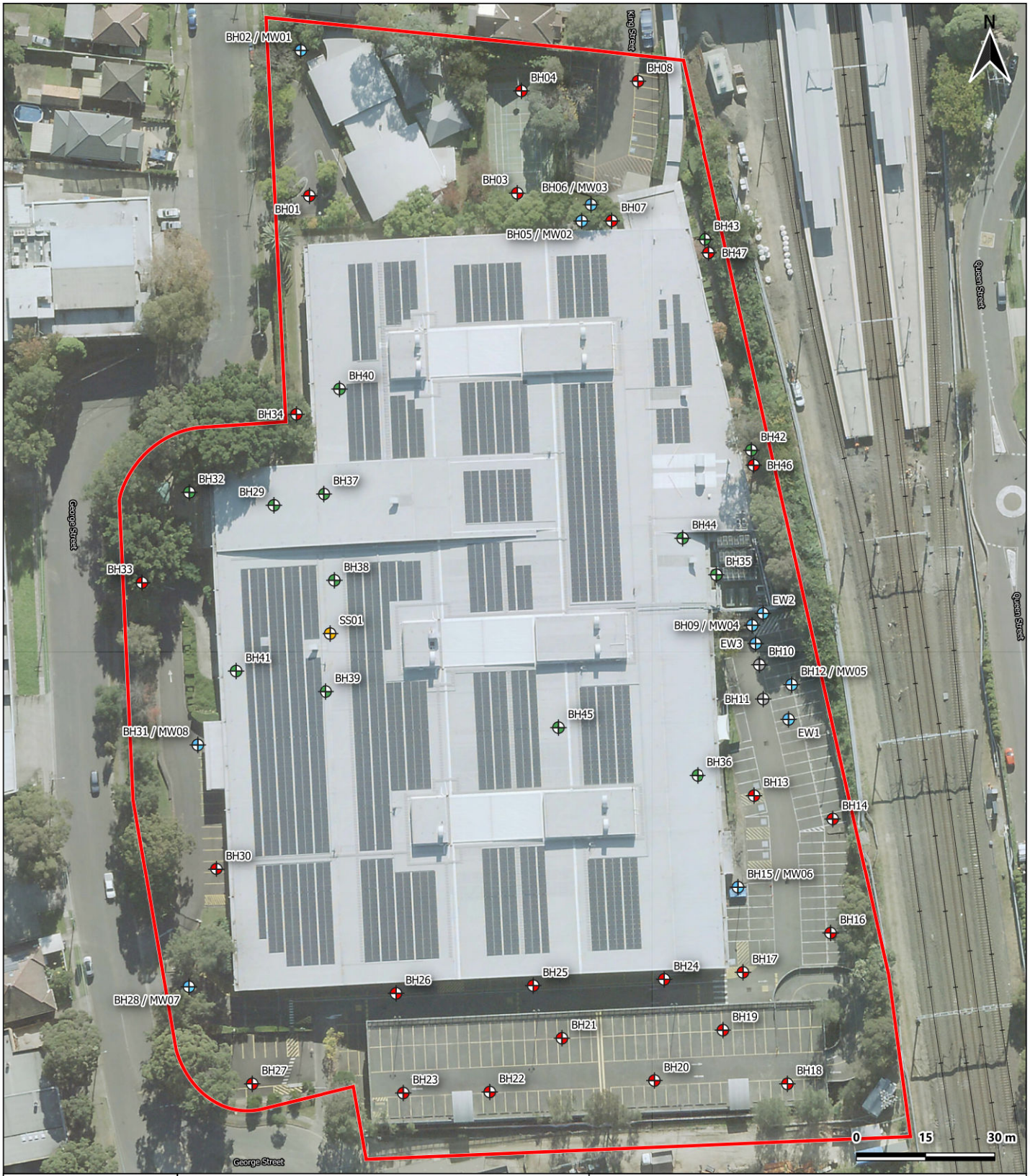
Figure 1 - Site Location

1 King Street, West Concord NSW

22038 - Detailed Site Investigation

Billbergia Pty Ltd

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Map	
22038_rp03_f02_samplelocs_v01	
Date of Export	**Map Scale (approx. at A3)**
23/01/2023	1:1,000
Author	**Approver**
author initials	approv. initials
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Railways

Sample Locations

- Borehole
- Borehole (Refused)
- Hand Auger
- Surface Sample
- Groundwater Monitoring Well

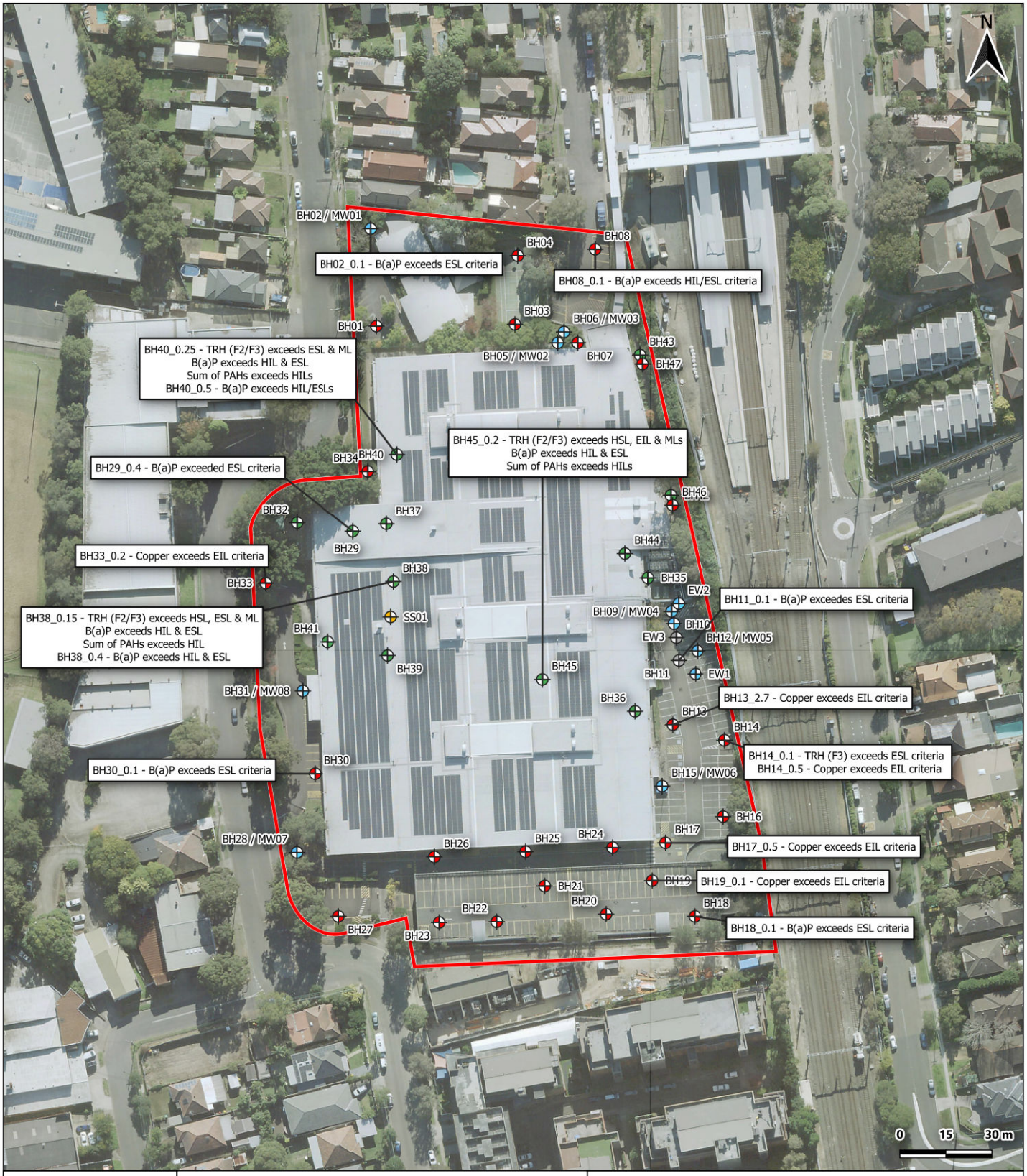
Figure 2 - Sample Locations

1 King Street, Concord West NSW

22038 - Detailed Site Investigation

Billbergia Pty Ltd

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Map	
22038_rp03_f03a_SoilExc_v01	
Date of Export	**Map Scale (approx. at A3)**
08/03/2023	1:1,500
Author	**Approver**
KS	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Railways

Sample Locations

- Borehole
- Borehole (Refused)
- Hand Auger
- Surface Sample
- Groundwater Monitoring Well

Figure 3a - Soil Exceedances (NEPM B)

1 King Street, Concord West NSW

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Map	
22038_rp03_f03b_soilExc_v01	
Date of Export	**Map Scale (approx. at A3)**
08/03/2023	1:1,500
Author	**Approver**
KS	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Railways

Sample Locations

- Borehole
- Borehole (Refused)
- Hand Auger
- Surface Sample
- Groundwater Monitoring Well

Figure 3b - Soil Exceedances (NEPM D)

1 King Street, Concord West NSW

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Map	
22038_rp03_f03c_GWExc_v01	
Date of Export	**Map Scale (approx. at A3)**
08/03/2023	1:1,500
Author	**Approver**
KS	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Railways

Sample Locations

- Borehole
- Borehole (Refused)
- Hand Auger
- Surface Sample
- Groundwater Monitoring Well

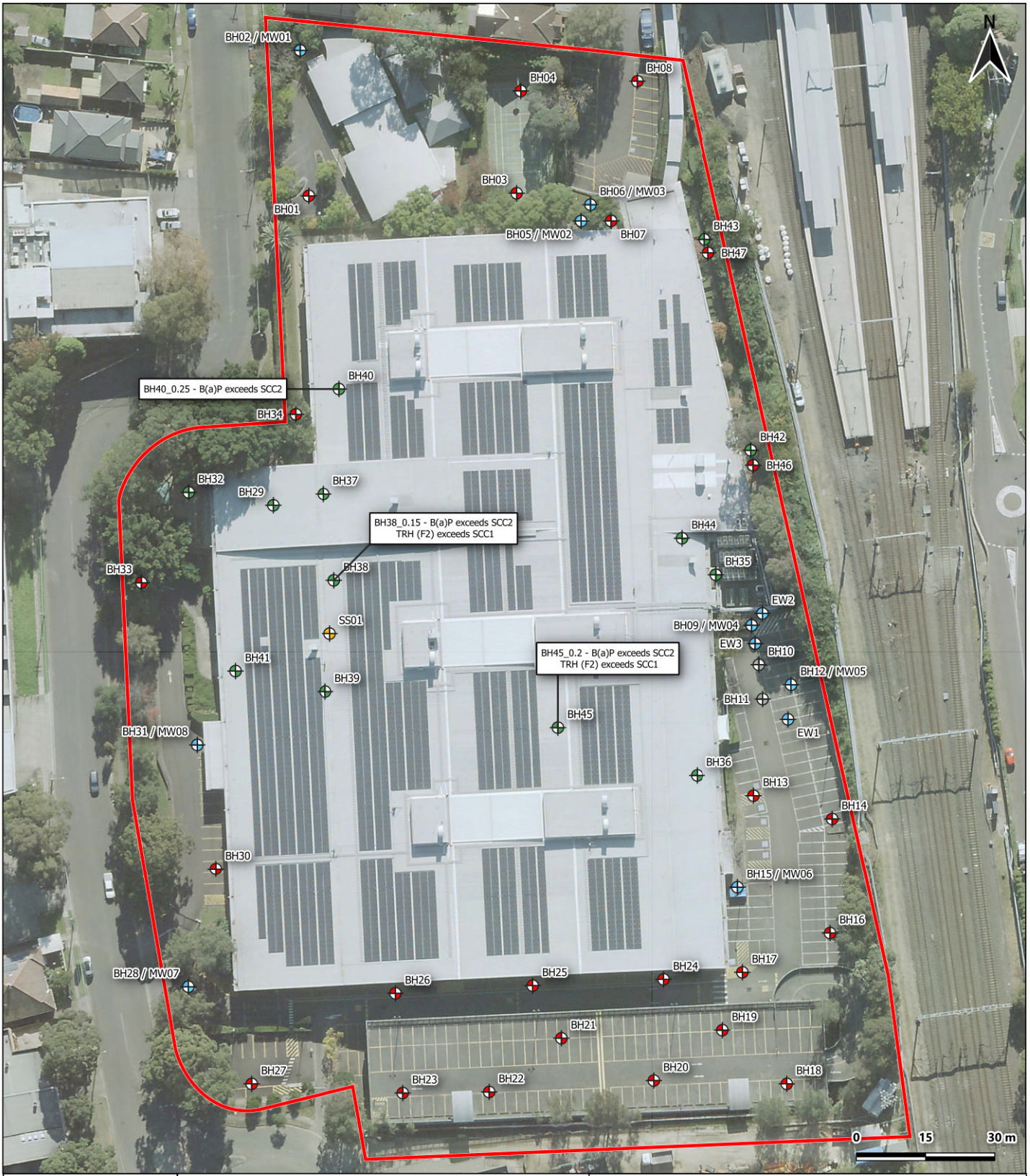
Figure 3c - Groundwater Exceedances

1 King Street, Concord West NSW

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Map	
22038_rp03_f03d_soilExc_v01	
Date of Export	**Map Scale (approx. at A3)**
21/03/2023	1:1,000
Author	**Approver**
KS	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Railways

Sample Locations

- Borehole
- Borehole (Refused)
- Hand Auger
- Surface Sample
- Groundwater Monitoring Well

Figure 3d - Soil Exceedances (WC)

1 King Street, Concord West NSW

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Map	
22038_rp03_f04_GWCont_v01	
Date of Export	**Map Scale (approx. at A3)**
23/02/2023	1:1,500
Author	**Approver**
TW	DS
Data Source	
Metromap, Google Maps, Open Street Map, Geoscience Australia	

Legend

- Site Boundary
- Groundwater Monitoring Well
- Railways

Watercourses

- Rivers
- Streams
- Minor Channels
- Minor Channels

Figure 4 - Groundwater Contours

1 King Street, Concord West NSW

22038 - Detailed Site Investigation

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B

Photo Board



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
1	5/12/22
Direction Facing South	
Description Northern façade of building, BH07.	

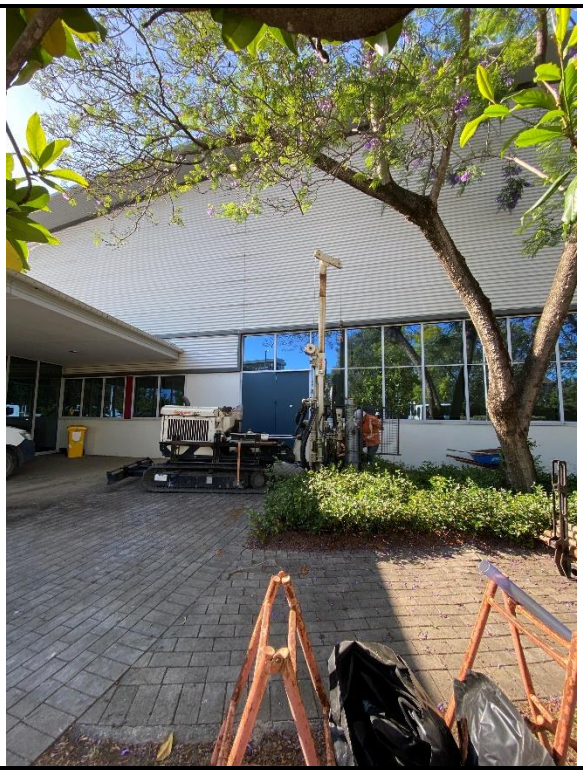


Photo No.	Date
2	5/12/22
Direction Facing -	
Description Natural soil.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
3	5/12/22
Direction Facing South	
Description BH34 location and north-western façade of building.	

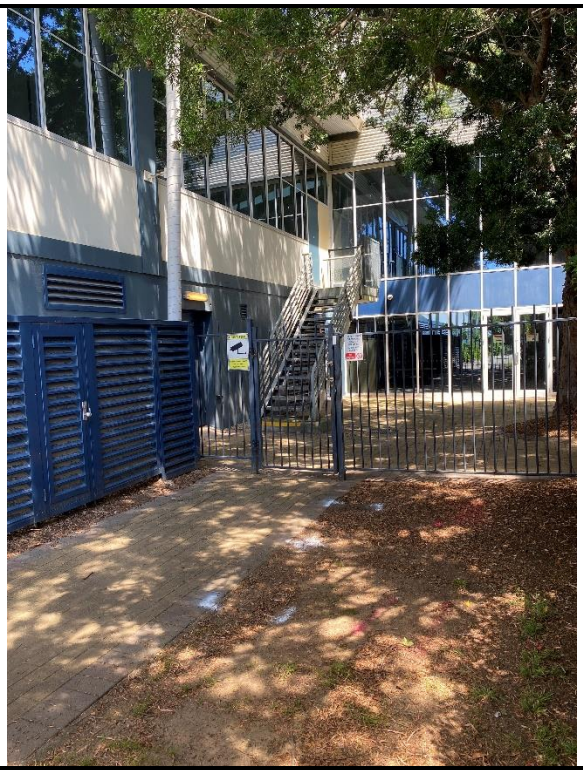


Photo No.	Date
4	6/12/22
Direction Facing South	
Description BH30 and south-western façade of building.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
5	6/12/22
Direction Facing East	
Description BH33 location.	



Photo No.	Date
6	6/12/22
Direction Facing West	
Description Southern façade of building.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
7	6/12/22
Direction Facing West	
Description South-eastern corner of building.	



Photo No.	Date
8	6/12/22
Direction Facing South	
Description South-eastern edge of site and BH14.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
9	6/12/22
Direction Facing West	
Description Eastern façade of building and BH14.	

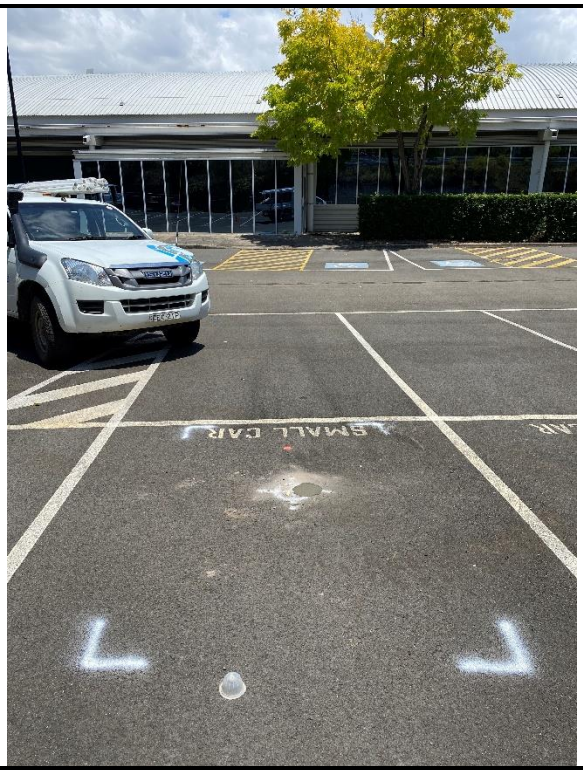


Photo No.	Date
10	6/12/22
Direction Facing South-west	
Description Eastern façade of building and BH13.	

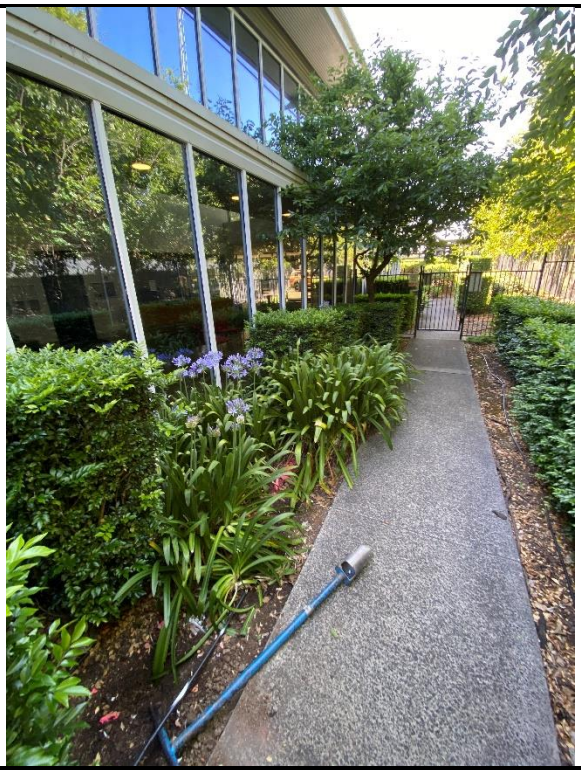


APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
11	6/12/22
Direction Facing North	
Description Garden beds along eastern façade of building, BH42/46 location.	



Photo No.	Date
12	6/12/22
Direction Facing North	
Description Garden beds along eastern façade of building, BH43/47 location.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
13	7/12/22
Direction Facing South	
Description BH36 location.	

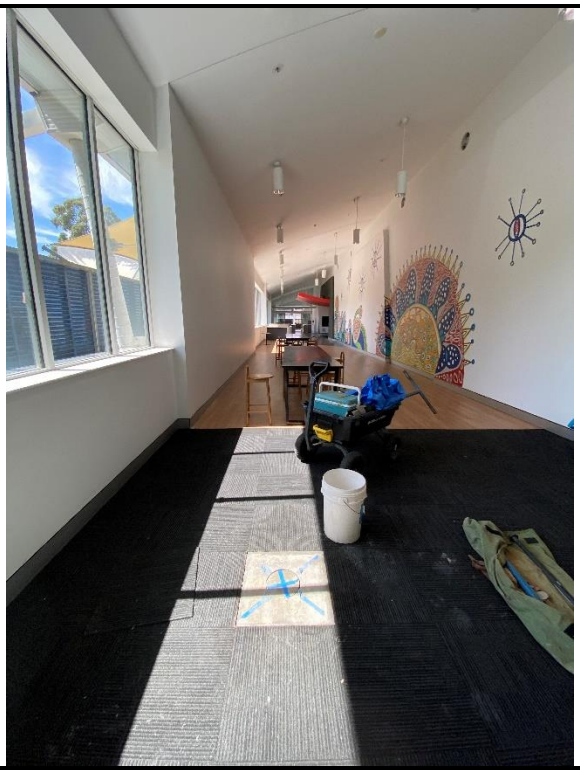
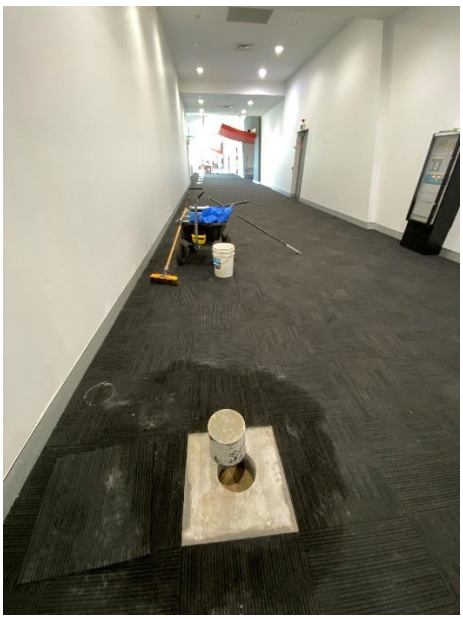
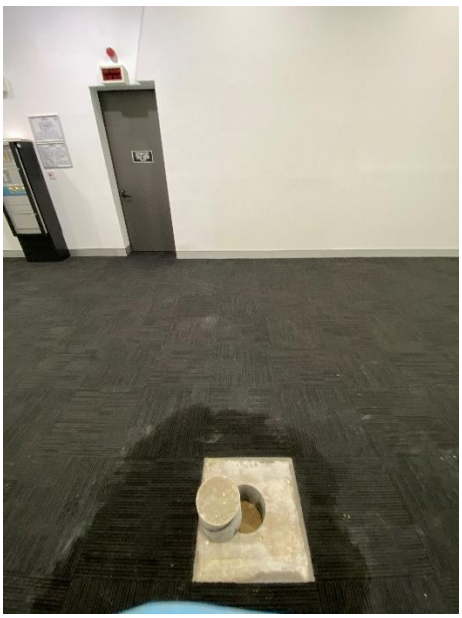


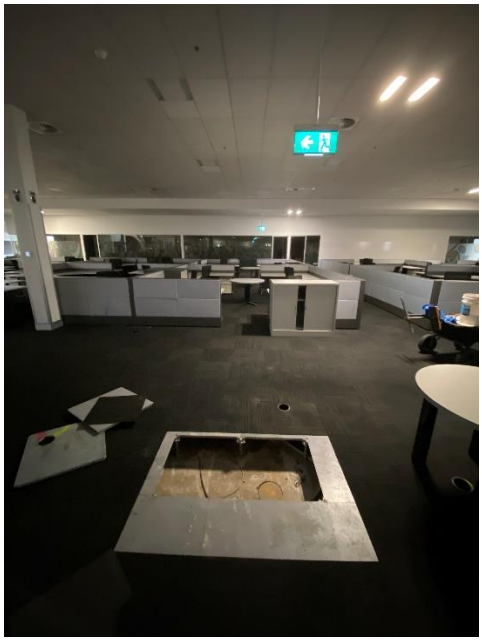
Photo No.	Date
14	7/12/22
Direction Facing South, West	
Description BH44 location.	





APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
15	7/12/22
Direction Facing -	
Description BH45 location.	



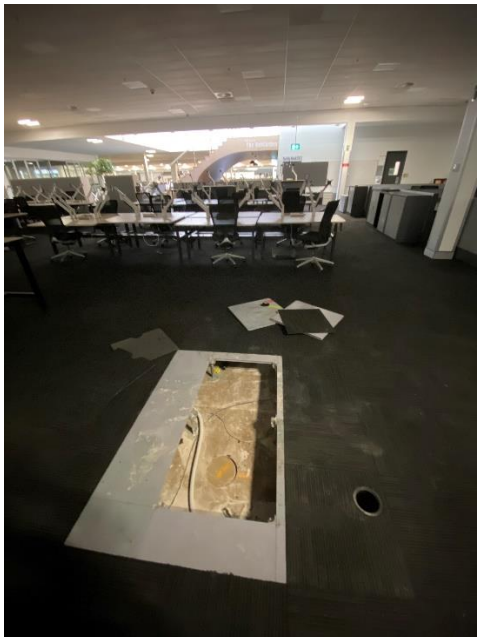


Photo No.	Date
16	7/12/22
Direction Facing North, south	
Description BH35 location.	



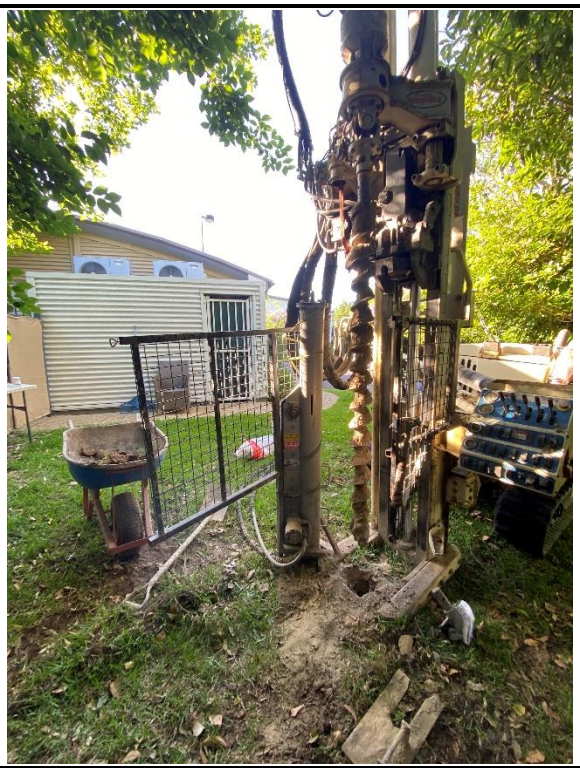


APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
17	7/12/22
Direction Facing West	
Description BH12/MW05 location.	



Photo No.	Date
18	8/12/22
Direction Facing South	
Description BH02/MW01 location.	

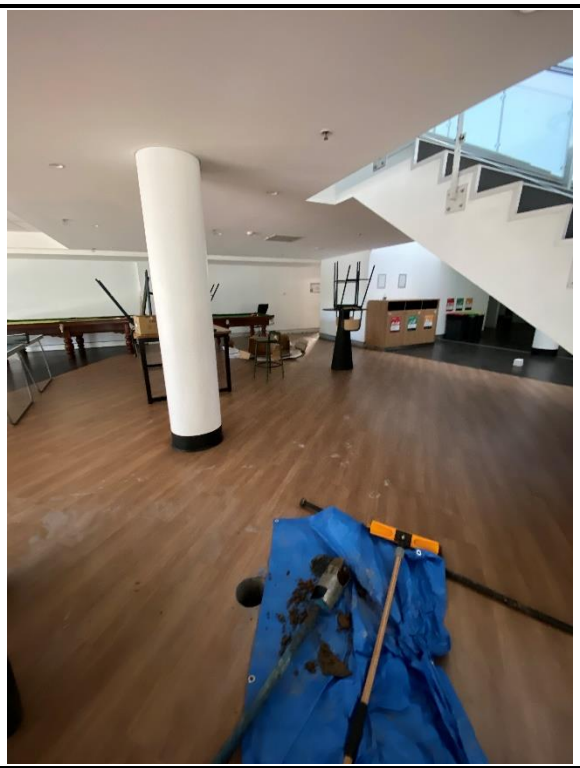


APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
19	8/12/22
Direction Facing South	
Description BH01 location.	



Photo No.	Date
20	8/12/22
Direction Facing North-east	
Description BH29 location	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
21	9/12/22
Direction Facing South	
Description BH32 location and western façade of building.	

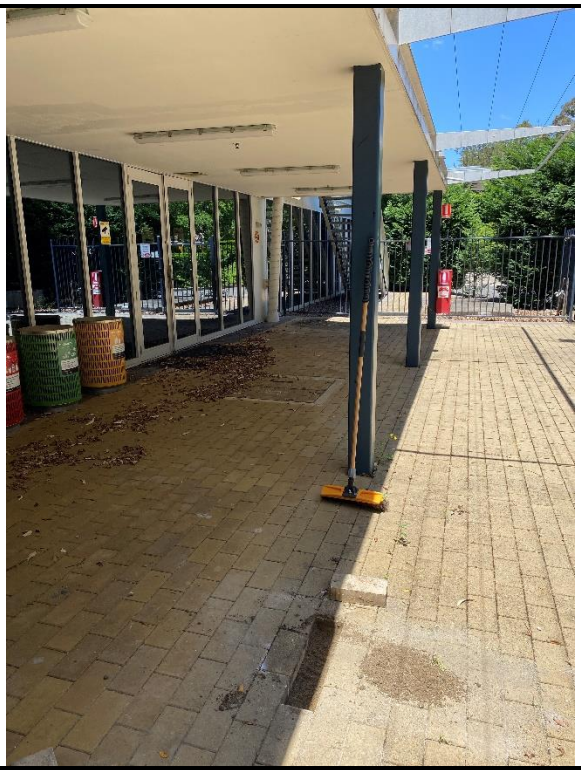
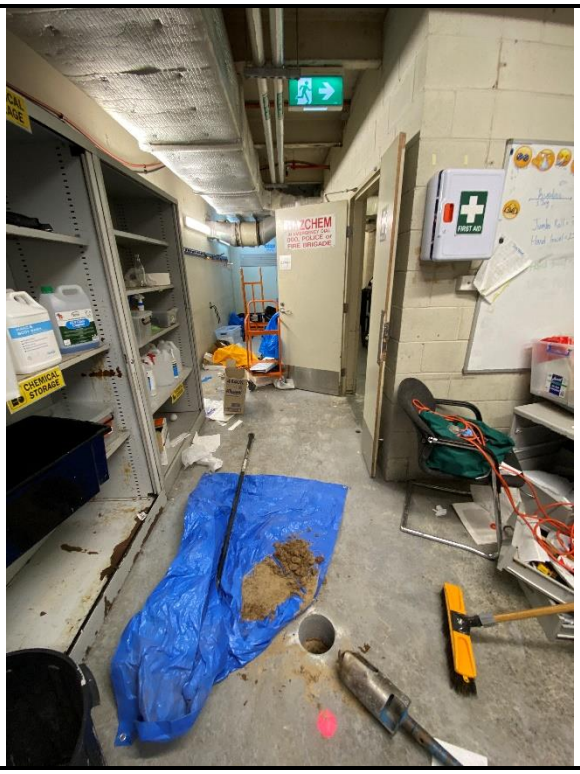


Photo No.	Date
22	9/12/22
Direction Facing -	
Description BH37 location.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
23	9/12/22

Direction Facing

-

Description

SS01 sample location.





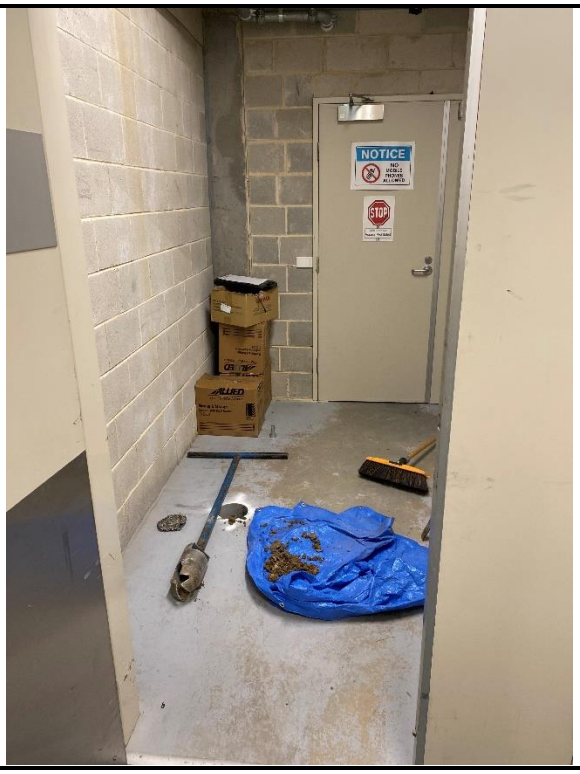
Photo No.	Date
24	9/12/22

Direction Facing

-

Description

BH39 location.



APPENDIX B SITE PHOTOGRAPHS	
Report Title Detailed Site Investigation	

Client Name	Site Location	Project Number
Billbergia	1 King Street, Concord West NSW	22038

Photo No.	Date
25	9/12/22

Direction Facing

-

Description

UST decommissioning plate on UST adjacent to EW2 and BH09/MW04.



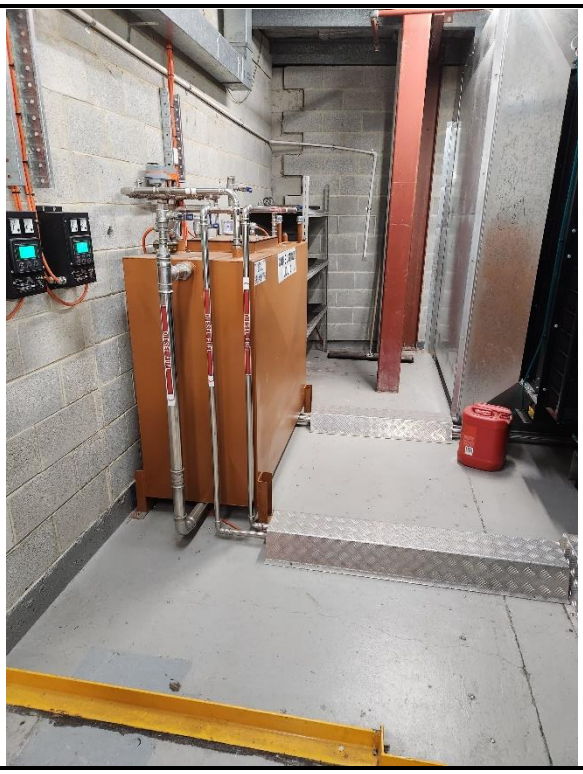
Photo No.	Date
26	-

Direction Facing

-

Description

Pump room.



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
27	5/12/2

Direction Facing
North

Description
Electrical substation on eastern edge of building.



Photo No.	Date
28	5/12/2022

Direction Facing
North

Description
BH03 location.



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
29	7/12/22
Direction Facing -	
Description Bituminous gravel.	

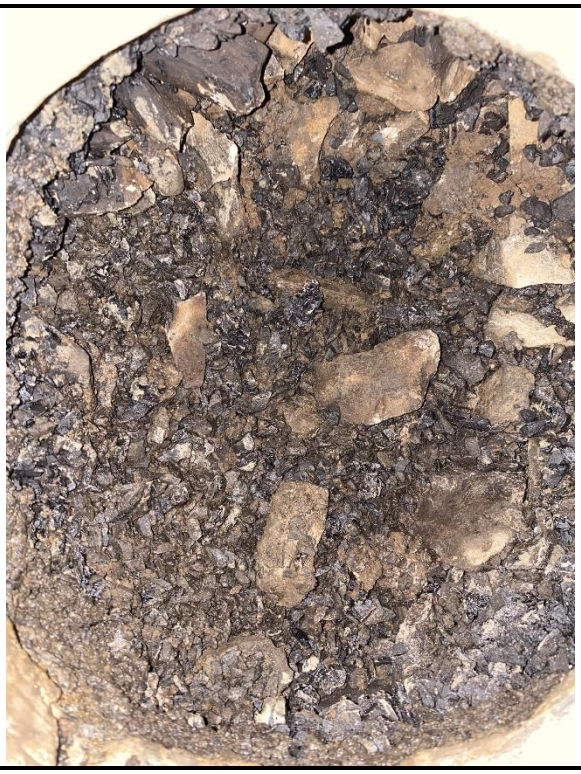
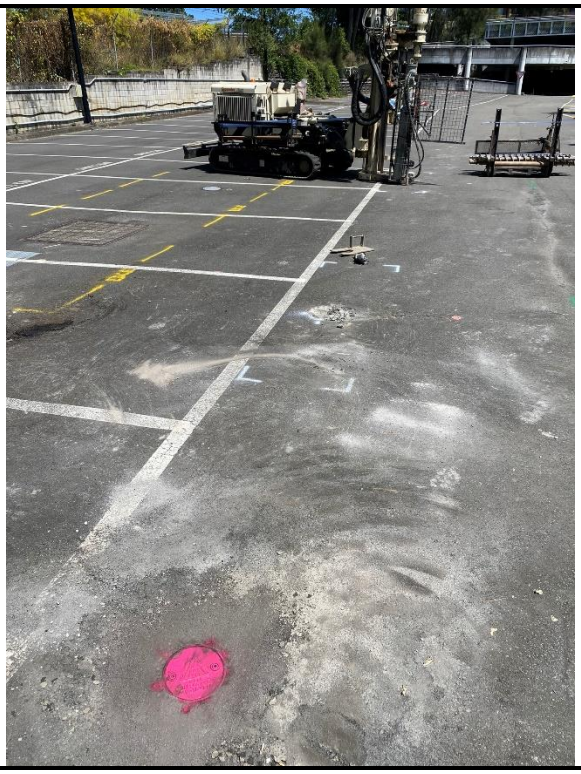


Photo No.	Date
30	8/12/22
Direction Facing South	
Description BH10/BH11 locations on concrete UST anchor.	



APPENDIX B SITE PHOTOGRAPHS		
Report Title Detailed Site Investigation		
Client Name Billbergia	Site Location 1 King Street, Concord West NSW	Project Number 22038

Photo No.	Date
31	5/12/22
Direction Facing -	
Description Typical fill and natural soil profile.	



C

Result Summary Tables

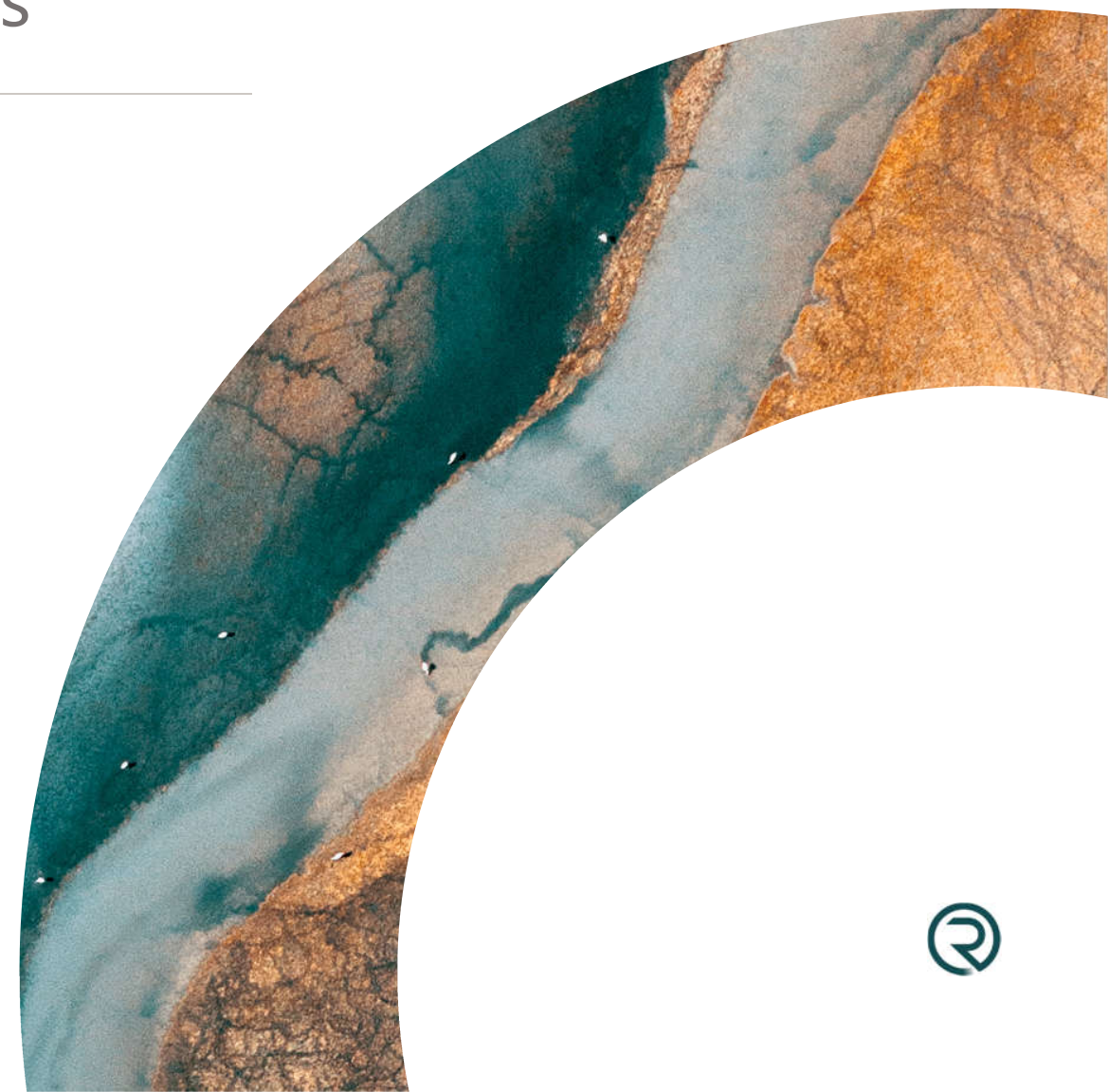


Table 1
Soil Results - High Density Residential Land Use

REDITUS

						Asbestos	BTEX								TRH							TPH				
						Asbestos Identification in Soil	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
						Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																										
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																										
>=0m, <1m							5	0.7	480	NL [#7]			110			50 [#8]		280 [#9]								
>=1m, <2m							NL [#7]	1	NL [#7]	NL			310			90		NL [#7]								
>=2m, <4m							NL	2	NL	NL			NL [#7]			150		NL								
>=4m							NL	3	NL	NL			NL			290		NL								
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space							170																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m								65	105	125			45			180 [#11]	120 [#12]	120 [#13]	1,300	5,600						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil															800 [#14]		1,000 [#14]		3,500	10,000						
Field ID	**Depth**	**Date**	**Matrix Type**	**atrix Descripti**	**Lab Report Number**																					
BH01	0.1	08 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH01	1.1	08 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	0.1	08 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	1	08 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH03	0.5	05 Dec 2022	Soil	Natural	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	0.15	05 Dec 2022	Soil	Natural	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	0.5	05 Dec 2022	Soil	Natural	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	160	<100	160	<25	<50	<100	100	100
BH05	1	05 Dec 2022	Soil	Natural	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH06	0.5	05 Dec 2022	Soil	Natural	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	300	<100	300	<25	<50	170	180	340
BH07	1	05 Dec 2022	Soil	Fill	312405-A	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH08	0.1	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	230	<100	230	<25	<50	130	130	260
BH08	0.5	05 Dec 2022	Soil	Natural	312405	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH09	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	170	<100	170	<25	<50	<100	110	110
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	180	270	450	<25	<50	<100	140	140
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH12	0.5	07 Dec 2022	Soil	Fill	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH13	2.7	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH14	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	53	53	1,800	1,200	3,000	<25	<50	970	1,100	2,100
BH14	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH15	0.1	07 Dec 2022	Soil	Natural	312652	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50

Table 1
Soil Results - High Density Residential Land Use

							Asbestos	BTEX								TRH							TPH				
							Asbestos Identification in Soil	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
							Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL								1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																											
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																											
>=0m, <1m								5	0.7	480	NL [#7]			110			50 [#8]		280 [#9]								
>=1m, <2m								NL [#7]	1	NL [#7]	NL			310			90		NL [#7]								
>=2m, <4m								NL	2	NL	NL			NL [#7]			150		NL								
>=4m								NL	3	NL	NL			NL			290		NL								
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space								170																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m									65	105	125			45			180 [#11]	120 [#12]	120 [#13]	1,300	5,600						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																800 [#14]		1,000 [#14]		3,500	10,000						
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	810	1,100	1,900	<25	<50	260	820	1,100
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH17	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	290	<100	290	<25	<50	140	190	340
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	200	160	360	<25	<50	110	140	240
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH19	1	16 Dec 2022	Soil	Natural	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH20	0.1	16 Dec 2022	Soil	Natural	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH21	0.1	16 Dec 2022	Soil	Fill	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH22	0.5	16 Dec 2022	Soil	Fill	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH22	1	16 Dec 2022	Soil	Natural	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH23	0.1	16 Dec 2022	Soil	Fill	313427	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	240	<100	240	<25	<50	180	<100	180
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH25	0.15	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH26	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	150	<100	150	<25	<50	110	<100	110
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	0.1	06 Dec 2022	Soil	Natural	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH28	1	08 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH30	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	180	<100	180	<25	<50	<100	110	110
BH30	1	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH31	3	08 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH33	0.1	06 Dec 2022	Soil	Fill	312491	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH34	0.1	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	200	<100	200	<25	<50	130	<100	130
BH34	0.5	05 Dec 2022	Soil	Fill	312405	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH35	0.5	07 Dec 2022	Soil	Natural	312652	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH36	0.25	07 Dec 2022	Soil	Fill	312652	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	110	<100	110	<25	<50	<100	<100	<50
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH38	0.15	09 Dec 2022	Soil	Fill	312813	ND	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	360	360	12,000	2,700	15,000	<25	140	7,700	5,300	13,000

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						Asbestos	BTEX								TRH							TPH				
						Asbestos Identification in Soil	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
						Comment	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																										
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																										
>=0m, <1m							**5**	**0.7**	**480**	**NL [#7]**			**110**			**50[#8]**		**280[#9]**							
>=1m, <2m							**NL [#7]**	**1**	**NL [#7]**	**NL**			**310**			**90**		**NL [#7]**							
>=2m, <4m							**NL**	**2**	**NL**	**NL**			**NL [#7]**			**150**		**NL**							
>=4m							**NL**	**3**	**NL**	**NL**			**NL**			**290**		**NL**							
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space							**170**																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m								**65**	**105**	**125**			**45**			**180[#11]**	**120[#12]**	**120[#13]**	**1,300**	**5,600**						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil															**800[#14]**		**1,000[#14]**		**3,500**	**10,000**						
BH38	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**670**	**110**	**780**	<25	<50	**450**	**260**	**710**
BH39	**0.3**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH40	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	**220**	**220**	**5,900**	**910**	**7,000**	<25	**120**	**4,100**	**2,200**	**6,400**
BH40	**0.5**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**400**	**110**	**510**	<25	<50	**260**	**190**	**450**
BH41	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH41	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH42	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**120**	<100	**120**	<25	<50	<100	<100	<50
BH43	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**130**	<100	**130**	<25	<50	<100	<100	<50
BH43	**0.3**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.35**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	**300**	**300**	**12,000**	**2,200**	**15,000**	<25	**140**	**8,400**	**4,900**	**13,000**
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**100**	<100	**100**	<25	<50	<100	<100	<50
BH46	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH47	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
SS1	**-**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	**ND**	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP01	**-**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**290**	<100	**290**	<25	<50	**170**	**160**	**330**
DUP02	**-**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP03	**-**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	**52**	**52**	**210**	<100	**260**	<25	**54**	**120**	**130**	**300**
DUP04	**-**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP05	**-**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
TRIP01	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**ES2244462**	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	**200**	**100**	**300**	<10	<50	**120**	**130**	**250**
TRIP02	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP03	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP04	**-**	**07 Dec 2022**	**Soil**	**QAQC**	**ES2244672**	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP05	**-**	**16 Dec 2022**	**Soil**	**QAQC**	**ES2245999**	-	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	**260**	**210**	**470**	<10	<50	**110**	**240**	**350**
Trip Blank 1	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	-	-	-	-	-	<25	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sample by its BaP TEF (ref Table 1A(1)) & summing
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider presence of carcinogenic PAHs (should meet BaP TEQ HIL) & napthalene (should meet relevant HSL)
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Shedule B7).
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability should be considered where appropriate.
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspected to be present.
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (inc dioxin like PCBs) should be undertaken
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtracted from the relevant fractions to obtain F1 & F2
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatism

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						PAH															
						Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.2	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																							4 [#1]	4 [#1]	400
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																									
>=0m, <1m																				5					
>=1m, <2m																				NL [#7]					
>=2m, <4m																				NL					
>=4m																				NL					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				170					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m											0.7														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																									
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number																				
BH01	0.1	08 Dec 2022	Soil	Fill	312813	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.1
BH01	1.1	08 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH02	0.1	08 Dec 2022	Soil	Fill	312813	2.7	<0.1	0.2	0.5	1.8	2.6	-	0.8	-	1.4	0.1	2.6	<0.1	1.1	<0.1	1.6	2.6	3.3	3.3	18
BH02	1	08 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH03	0.5	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	0.15	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	0.5	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH05	1	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	0.6	<0.1	<0.1	<0.1	0.2	0.2	-	0.1	-	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	1.5
BH06	0.5	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	0.4	<0.1	<0.1	<0.1	<0.1	0.09	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.5
BH07	1	05 Dec 2022	Soil	Fill	312405-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH08	0.1	05 Dec 2022	Soil	Fill	312405	8.9	<0.1	0.4	0.4	3.3	2.9	-	1.7	-	2.0	0.3	3.6	<0.1	1.7	<0.1	1.2	4.6	4.6	4.6	31
BH08	0.5	05 Dec 2022	Soil	Natural	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH09	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.07	-	<0.1	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.52
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	0.7	<0.1	<0.1	<0.1	0.3	0.82	-	0.2	-	0.3	<0.1	0.3	<0.1	0.6	<0.1	<0.1	0.5	1.0	1.1	3.7
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH12	0.5	07 Dec 2022	Soil	Fill	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.08	-	<0.1	-	0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.2	0.2	<0.5	<0.5	1.0
BH13	2.7	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH14	0.1	06 Dec 2022	Soil	Fill	312491	1	0.3	<0.1	0.4	1.1	0.60	-	0.5	-	0.7	<0.1	1.7	<0.1	0.2	<0.1	1.6	1.6	0.9	1	10
BH14	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH15	0.1	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	0.3	<0.1	<0.1	<0.1	0.2	0.2	<0.5	<0.5	0.82

Table 1
Soil Results - High Density Residential Land Use

						PAH																
						Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.2	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																						4 [#1]	4 [#1]	400
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																								
>=0m, <1m																				5				
>=1m, <2m																				NL [#7]				
>=2m, <4m																				NL				
>=4m																				NL				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				170				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m											0.7													
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																								
BH15	0.5	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	0.4	<0.1	<0.1	<0.1	0.4	0.3	-	0.5	-	0.4	<0.1	0.3	<0.1	0.2	<0.1	0.3	0.5	<0.5	<0.5	3.1
BH16	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH17	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.5	<0.5	0.1
BH17	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	2	<0.1	<0.1	0.2	1	0.97	-	0.6	-	1.1	0.1	1.7	<0.1	0.5	<0.1	0.6	2.2	1.4	1.4	10
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	0.3	<0.1	<0.1	<0.1	0.2	0.1	-	<0.1	-	0.2	<0.1	0.3	<0.1	<0.1	<0.1	<0.1	0.3	<0.5	<0.5	1.3
BH19	1	16 Dec 2022	Soil	Natural	313427	<0.2	<0.1	<0.1	<0.1	<0.2	0.06	-	<0.1	-	<0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.4
BH20	0.1	16 Dec 2022	Soil	Natural	313427	0.6	<0.1	<0.1	0.1	0.4	0.4	-	0.2	-	0.4	<0.1	0.9	<0.1	0.2	<0.1	0.6	0.9	0.5	0.6	4.8
BH21	0.1	16 Dec 2022	Soil	Fill	313427	0.7	<0.1	<0.1	0.2	0.4	0.4	-	0.2	-	0.5	<0.1	1	<0.1	0.2	<0.1	0.6	0.9	0.6	0.7	5.1
BH21	2.8	16 Dec 2022	Soil	Natural	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH22	0.5	16 Dec 2022	Soil	Fill	313427	0.4	<0.1	<0.1	0.1	0.3	0.2	-	0.1	-	0.3	<0.1	0.5	<0.1	0.1	<0.1	0.3	0.6	<0.5	<0.5	2.9
BH22	1	16 Dec 2022	Soil	Natural	313427	0.5	<0.1	<0.1	0.1	0.4	0.4	-	0.2	-	0.4	<0.1	0.6	<0.1	0.2	<0.1	0.3	1.2	0.5	0.6	4.3
BH23	0.1	16 Dec 2022	Soil	Fill	313427	0.7	<0.1	<0.1	0.1	0.5	0.4	-	0.2	-	0.5	<0.1	0.7	<0.1	0.2	<0.1	0.3	1	0.6	0.7	4.6
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.1	-	<0.1	-	0.2	<0.1	0.2	<0.1	<0.1	<0.1	0.2	0.2	<0.5	<0.5	1.0
BH24	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH25	0.15	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH25	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH26	0.1	06 Dec 2022	Soil	Fill	312491	0.9	0.2	<0.1	0.6	0.8	0.70	-	0.4	-	1.4	0.1	1.6	0.2	0.3	<0.1	2.3	1.8	1.0	1.0	11
BH26	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH27	0.1	06 Dec 2022	Soil	Natural	312491	0.2	<0.1	<0.1	<0.1	0.1	0.09	-	0.1	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.68
BH27	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.1
BH28	1	08 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	0.2	<0.1	<0.1	<0.1	0.1	0.2	-	<0.1	-	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.74
BH29	0.4	09 Dec 2022	Soil	Natural	312813	0.9	<0.1	<0.1	<0.1	0.6	0.92	-	0.2	-	0.4	<0.1	0.4	<0.1	0.3	<0.1	0.1	0.5	1.1	1.2	4.2
BH30	0.1	06 Dec 2022	Soil	Fill	312491	2.6	<0.1	<0.1	0.2	0.9	1.8	-	0.6	-	1.5	<0.1	1.2	<0.1	0.3	<0.1	1.1	1.8	2.3	2.4	12
BH30	1	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	0.9	<0.1	<0.1	0.2	0.8	0.52	-	0.3	-	0.5	<0.1	1.0	<0.1	0.3	<0.1	0.5	1.2	0.8	0.8	6.3
BH31	0.5	08 Dec 2022	Soil	Fill	312813	0.3	<0.1	<0.1	<0.1	0.1	0.2	-	<0.1	-	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	1.0
BH31	3	08 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	0.2	<0.1	<0.1	<0.1	0.2	0.2	-	<0.1	-	0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	0.2	<0.5	<0.5	1.1
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	0.3	<0.1	<0.1	<0.1	0.1	0.2	-	<0.1	-	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	1.0
BH33	0.1	06 Dec 2022	Soil	Fill	312491	0.4	<0.1	<0.1	<0.1	0.2	0.3	-	0.2	-	0.2	<0.1	0.1	<0.1	0.2	<0.1	<0.1	0.2	<0.5	<0.5	1.7
BH33	0.5	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	0.3	0.2	-	0.2	-	0.3	<0.1	0.2	<0.1	0.2	<0.1	<0.1	0.3	<0.5	<0.5	1.6
BH34	0.1	05 Dec 2022	Soil	Fill	312405	0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.2
BH34	0.5	05 Dec 2022	Soil	Fill	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH35	0.5	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH35	0.7	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH36	0.25	07 Dec 2022	Soil	Fill	312652	1	<0.1	<0.1	0.2	0.6	0.53	-	0.4	-	0.7	<0.1	1.0	<0.1	0.3	<0.1	0.4	0.8	0.8	0.8	5.9
BH36	0.4	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	1	<0.1	<0.1	<0.1	0.5	0.59	-	0.5	-	0.5	0.1	0.7	<0.1	0.4	<0.1	0.2	0.7	0.9	0.9	5.1
BH37	0.2	09 Dec 2022	Soil	Fill	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH37	0.35	09 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH38	0.15	09 Dec 2022	Soil	Fill	312813	310	8.0	3.4	50	210	250	-	61	-	130	22	300	4.8	100	<1	190	300	340	340	1,900

Table 1
Soil Results - High Density Residential Land Use

						PAH																
						Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.2	0.1	0.1	0.1	0.1	0.05	0.5	0.1	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																							4 #1	4 #1	400
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																									
>=0m, <1m																				5					
>=1m, <2m																				NL #7					
>=2m, <4m																				NL					
>=4m																				NL					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				170					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m											0.7														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																									
BH38	0.4	09 Dec 2022	Soil	Natural	312813	14	0.4	0.2	3.2	9.8	7.8	-	4.4	-	9.7	1.0	23	0.2	3.5	<0.1	16	22	12	12	120
BH39	0.3	09 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	0.07	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.07
BH40	0.25	09 Dec 2022	Soil	Fill	312813	160	4.3	2.2	60	130	140	-	25	-	86	9.3	220	1.3	48	<1	200	190	180	180	1,300
BH40	0.5	09 Dec 2022	Soil	Natural	312813	9.8	0.2	0.2	4.3	7.1	5.5	-	3.2	-	7.4	0.5	18	<0.1	2.5	<0.1	14	16	8.1	8.1	89
BH41	0.25	09 Dec 2022	Soil	Fill	312813	0.2	<0.1	<0.1	<0.1	0.1	0.2	-	<0.1	-	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.78
BH41	0.4	09 Dec 2022	Soil	Natural	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH42	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.2	-	0.2	-	0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.92
BH43	0.1	06 Dec 2022	Soil	Fill	312491	<0.2	<0.1	<0.1	<0.1	0.2	0.1	-	<0.1	-	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.79
BH43	0.3	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	0.2	0.09	-	<0.1	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.50
BH44	0.25	07 Dec 2022	Soil	Fill	312652	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	-	<0.1	-	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.54
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH45	0.2	07 Dec 2022	Soil	Fill	312652	130	7.2	3.2	38	96	79	-	38	-	100	8.9	240	2.6	32	1.3	90	210	120	120	1,100
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	2	<0.1	<0.1	0.5	1.4	0.98	-	0.6	-	1.5	0.1	3.6	<0.1	0.4	<0.1	1.1	3.1	1.5	1.5	15
BH46	1	16 Dec 2022	Soil	Fill	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH47	1	16 Dec 2022	Soil	Fill	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
SS1	-	08 Dec 2022	Soil	Fill	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
DUP01	-	05 Dec 2022	Soil	Fill	312405	0.8	<0.1	<0.1	<0.1	0.2	0.2	-	0.1	-	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	1.6
DUP02	-	06 Dec 2022	Soil	Natural	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
DUP03	-	06 Dec 2022	Soil	Fill	312491	0.2	<0.1	<0.1	<0.1	<0.1	0.2	-	0.1	-	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.86
DUP04	-	07 Dec 2022	Soil	Fill	312652	0.2	<0.1	<0.1	<0.1	0.2	0.2	-	0.1	-	0.2	<0.1	0.2	<0.1	0.1	<0.1	<0.1	0.2	<0.5	<0.5	1.5
DUP05	-	16 Dec 2022	Soil	Fill	313427	<0.2	<0.1	<0.1	<0.1	0.1	0.09	-	<0.1	-	0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.68
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	-	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	<0.5	0.6	1.0	0.8	1.2	3.1
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	-	<0.5	<0.5	<0.5	1.3	1.3	1.4	0.7	0.5	1.2	<0.5	2.1	<0.5	0.6	<0.5	0.8	3.2	1.9	2.2	13.1
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and shou
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						Inorganics						Organic	Particle Size	Metals								
						Exchangeable Calcium	Exchangeable Magnesium	Exchangeable Potassium	Exchangeable Sodium	Ammonia as N	Cation Exchange Capacity	Total Organic Carbon	Clay in soils <2um	Arsenic	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc
						meq/100g	meq/100g	meq/100g	meq/100g	mg/kg	meq/100g	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.1	0.1	0.1	0.1	0.5	1	1,000		4	0.4	1	1	10	1	0.1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)														**500**[R3]	**150**	**500**[R15]	**30,000**		**1,200**[R4]	**120**[R5]	**1,200**	**60,000**
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space														**100**[R10]		**410**	**70**		**1,100**		**160**	**280**
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
Field ID	**Depth**	**Date**	**Matrix Type**	**atrix Descripti**	**Lab Report Number**																	
BH01	**0.1**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	**5**	<0.4	**15**	**33**	-	**24**	<0.1	**17**	**35**
BH01	**1.1**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**9.3**	**3.4**	**0.2**	**1.1**	-	**14**	**7,000**	**81**	**6**	<0.4	**25**	**19**	**57,000**	**19**	<0.1	**8**	**39**
BH02	**0.1**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	<4	<0.4	**8**	**34**	-	**55**	<0.1	**8**	**59**
BH02	**1**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	**7**	<0.4	**22**	**19**	-	**23**	<0.1	**7**	**14**
BH02	**2**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	**5**	<0.4	**20**	**28**	-	**25**	<0.1	**3**	**10**
BH03	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**15**	**21**	-	**25**	<0.1	**2**	**6**
BH04	**0.15**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**13**	**21**	-	**51**	<0.1	**1**	**6**
BH04	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**3**	**10**	-	**15**	<0.1	<1	**4**
BH04	**1**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	**0.1**	**2.3**	**0.2**	**1.1**	**2.4**	**3.8**	**5,000**	**27**	-	-	-	-	**28,000**	-	-	-	-
BH05	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**11**	**30**	-	**12**	<0.1	**43**	**50**
BH05	**1**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**12**	**13**	-	**18**	<0.1	**1**	**4**
BH05	**3**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	**7**	<0.4	**13**	**28**	-	**90**	<0.1	**8**	**29**
BH06	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	**6**	<0.4	**20**	**26**	-	**25**	<0.1	**3**	**9**
BH06 - [TRIPLICATE]	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**14**	**16**	-	**17**	<0.1	**2**	**7**
BH07	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	**5**	<0.4	**13**	**26**	-	**25**	<0.1	**15**	**100**
BH07	**1**	**05 Dec 2022**	**Soil**	**Fill**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**5**	**21**	-	**16**	<0.1	**2**	**13**
BH08	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	<4	<0.4	**8**	**23**	-	**36**	<0.1	**9**	**39**
BH08	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	**5**	<0.4	**12**	**29**	-	**16**	<0.1	**2**	**14**
BH09	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	<4	<0.4	**11**	**25**	-	**19**	<0.1	**6**	**34**
BH09	**0.5**	**06 Dec 2022**	**Soil**	**Fill**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	**5**	<0.4	**3**	**25**	-	**13**	<0.1	**2**	**18**
BH09	**4**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	<4	<0.4	**13**	**14**	-	**19**	<0.1	**7**	**27**
BH11	**0.1**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	<4	<0.4	**16**	**54**	-	**17**	<0.1	**11**	**43**
BH11 - [TRIPLICATE]	**0.1**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	<4	<0.4	**8**	**24**	-	**10**	<0.1	**6**	**26**
BH12	**0.1**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	<4	<0.4	**10**	**8**	-	**15**	<0.1	**7**	**26**
BH12	**0.5**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	<4	<0.4	**11**	**8**	-	**9**	<0.1	**9**	**22**
BH12	**2**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	**20**	**1.1**	**0.4**	**0.5**	-	**22**	**4,000**	**33**	**6**	<0.4	**9**	**50**	**34,000**	**18**	<0.1	**13**	**53**
BH12	**4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	<4	<0.4	**14**	**33**	-	**17**	<0.1	**11**	**30**
BH13	**2.7**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	<4	<0.4	**9**	**77**	-	**28**	<0.1	**33**	**160**
BH14	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	<4	<0.4	**17**	**51**	-	**32**	<0.1	**7**	**46**
BH14	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	**35**	<0.4	**8**	**93**	-	**43**	<0.1	**76**	**360**
BH15	**0.1**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	<4	<0.4	**7**	**56**	-	**17**	<0.1	**10**	**33**

Table 1
Soil Results - High Density Residential Land Use

						Inorganics						Organic	Particle Size	Metals							
						Exchangeable Calcium	Exchangeable Magnesium	Exchangeable Potassium	Exchangeable Sodium	Ammonia as N	Cation Exchange Capacity	Total Organic Carbon	Clay in soils <2um	Arsenic	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc
						meq/100g	meq/100g	meq/100g	meq/100g	mg/kg	meq/100g	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.1	0.1	0.1	0.1	0.5	1	1,000		4	0.4	1	1	10	1	0.1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)														500[#3]	150	500[#15]	30,000		1,200[#4]	120[#5]	1,200	60,000
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space														100[#10]		410	70		1,100		160	280
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	<4	<0.4	8	60	-	35	<0.1	12	43
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	11	58	-	21	<0.1	11	35
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	<4	<0.4	5	63	-	45	<0.1	38	150
BH17	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	16	50	-	34	<0.1	12	35
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	<4	<0.4	3	88	-	21	0.4	3	240
BH17	2	06 Dec 2022	Soil	Natural	312491	0.4	3.6	0.4	2.4	2.2	6.8	4,000	39	-	-	-	-	27,000	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	<4	<0.4	3	75	-	20	<0.1	3	130
BH18	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	11	18	-	19	<0.1	9	28
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	5	10	-	10	<0.1	5	15
BH19	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	<4	<0.4	9	91	-	10	<0.1	10	40
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	5	<0.4	8	68	-	25	<0.1	22	90
BH20	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	<4	<0.4	18	27	-	16	<0.1	14	31
BH21	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	4	<0.4	28	21	-	7	<0.1	30	23
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	<4	<0.4	5	50	-	11	<0.1	13	79
BH22	0.5	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	11	37	-	20	<0.1	9	30
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	<4	<0.4	6	46	-	16	<0.1	4	17
BH23	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	20	22	-	20	<0.1	16	28
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	6	<0.4	11	20	-	20	<0.1	7	25
BH24	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	20	37	-	29	<0.1	22	59
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	<4	<0.4	7	76	-	18	<0.1	10	57
BH25	0.15	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	7	35	-	15	<0.1	4	23
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	<4	<0.4	6	79	-	18	<0.1	10	59
BH26	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	16	23	-	13	<0.1	16	32
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	5	<0.4	5	21	-	12	<0.1	2	17
BH27	0.1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	10	<0.4	25	51	-	160	0.1	12	92
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	4	<0.4	20	27	-	22	<0.1	3	10
BH27	1	06 Dec 2022	Soil	Natural	312491	0.5	1.4	<0.1	0.2	2.2	2.2	<1,000	53	-	-	-	-	32,000	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	8	<0.4	10	23	-	18	<0.1	4	16
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	7	<0.4	6	27	-	11	<0.1	5	49
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	11	32	-	23	<0.1	13	28
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	4	<0.4	6	28	-	13	<0.1	5	21
BH30	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	12	26	-	36	<0.1	7	41
BH30	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	7	<0.4	25	26	-	38	<0.1	9	34
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	12	13	-	25	<0.1	7	32
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	5	<0.4	19	16	-	13	<0.1	3	11
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	8	36	-	3	<0.1	67	34
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	4	<0.4	21	18	-	21	<0.1	13	41
BH33	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	<4	<0.4	17	32	-	89	<0.1	9	54
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	7	<0.4	22	160	-	42	<0.1	9	61
BH34	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	4	<0.4	21	36	-	25	<0.1	33	270
BH34	0.5	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	4	<0.4	20	15	-	22	<0.1	8	23
BH35	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	<4	<0.4	7	34	-	24	<0.1	4	23
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	6	<0.4	19	20	-	25	<0.1	10	27
BH36	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	<4	<0.4	13	24	-	53	<0.1	7	54
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	4	<0.4	14	32	-	28	<0.1	10	38
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	<4	<0.4	12	26	-	29	<0.1	6	37
BH37	0.2	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	7	5	-	4	<0.1	7	7
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	7	<0.4	21	11	-	14	<0.1	4	8
BH38	0.15	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	3	3	-	3	<0.1	2	10

Table 1
Soil Results - High Density Residential Land Use

						Inorganics						Organic	Particle Size	Metals								
						Exchangeable Calcium	Exchangeable Magnesium	Exchangeable Potassium	Exchangeable Sodium	Ammonia as N	Cation Exchange Capacity	Total Organic Carbon	Clay in soils <2um	Arsenic	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc
						meq/100g	meq/100g	meq/100g	meq/100g	mg/kg	meq/100g	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.1	0.1	0.1	0.1	0.5	1	1,000		4	0.4	1	1	10	1	0.1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)														500[#3]	150	500[#15]	30,000		1,200[#4]	120[#5]	1,200	60,000
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space														100[#10]		410	70		1,100		160	280
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
BH38	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	5	<0.4	13	13	-	13	<0.1	2	5
BH39	0.3	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	4	<0.4	13	27	-	20	<0.1	7	24
BH40	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	3	42	-	1	<0.1	24	15
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	4	<0.4	24	14	-	16	<0.1	10	19
BH41	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	<4	<0.4	22	30	-	24	<0.1	24	42
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	6	<0.4	19	21	-	23	<0.1	8	59
BH42	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	7	<0.4	15	43	-	31	<0.1	10	110
BH43	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	6	<0.4	14	35	-	26	<0.1	16	47
BH43	0.3	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	5	<0.4	12	34	-	29	<0.1	9	30
BH44	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	<4	<0.4	8	21	-	31	<0.1	3	42
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	<4	<0.4	12	28	-	22	<0.1	7	18
BH45	0.2	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	<4	<0.4	1	290	-	2	<0.1	4	14
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	8	<0.4	23	29	-	30	<0.1	11	44
BH46	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	4	13	-	13	<0.1	2	7
BH47	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	3	3	-	2	<0.1	2	4
SS1	-	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	6	<0.4	18	9	-	15	<0.1	2	8
DUP01	-	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	6	<0.4	18	25	-	27	<0.1	13	110
DUP02	-	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	4	<0.4	24	28	-	25	<0.1	5	12
DUP03	-	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	7	<0.4	16	38	-	32	<0.1	10	120
DUP04	-	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	<4	<0.4	11	17	-	30	<0.1	4	39
DUP05	-	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	<4	<0.4	6	15	-	10	<0.1	4	16
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	-	-	-	-	-	-	-	-	<5	<1	10	23	-	20	<0.1	12	160
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	7	<1	24	24	-	24	<0.1	8	18
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	5	<1	8	23	-	19	<0.1	7	102
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	-	-	-	-	-	-	-	-	<5	<1	7	10	-	31	<0.1	2	47
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	-	-	-	-	-	-	-	-	<5	<1	13	25	-	43	<0.1	9	48
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						VOCs																
						1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number																	
BH01	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	1.1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.15	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	1	05 Dec 2022	Soil	Fill	312405-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH07	3	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.5	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	2.7	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.1	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						VOCs																		
						1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																								
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																								
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																								
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

						VOCs																	
						1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																							
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																							
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																							
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																							
BH38	0.4	09 Dec 2022	Soil	Natural	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH39	0.3	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	09 Dec 2022	Soil	Fill	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH44	0.35	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1	-	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	-	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	-	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	-	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	-	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	-	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bio
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						VOCs														
						1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																				
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																				
>=0m, <1m																				
>=1m, <2m																				
>=2m, <4m																				
>=4m																				
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																				
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																				
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																				
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number															
BH01	1.1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.15	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	1	05 Dec 2022	Soil	Fill	312405-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH07	3	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	<1	<1	<1
BH09	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.5	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	2.7	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.1	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

						VOCs																
						1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

						VOCs															
						1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																					
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																					
>=0m, <1m																					
>=1m, <2m																					
>=2m, <4m																					
>=4m																					
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																					
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																					
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																					
BH38	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH39	**0.3**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	**0.5**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	**0.3**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH44	**0.35**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	**0.5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1	**-**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	**-**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	**-**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	**-**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	**-**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	**-**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP01	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**ES2244462**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP02	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP03	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP04	**-**	**07 Dec 2022**	**Soil**	**QAQC**	**ES2244672**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP05	**-**	**16 Dec 2022**	**Soil**	**QAQC**	**ES2245999**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						VOCs																SVOCs
						Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Fenamiphos
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number																	
BH01	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	1.1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.15	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	1	05 Dec 2022	Soil	Fill	312405-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH07	3	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH09	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.5	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	2.7	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.1	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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						VOCs																		SVOCs
						Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Fenamiphos
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																							
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																							
>=0m, <1m																							
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NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																							
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																							
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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						VOCs																		SVOCs
						Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride	Fenamiphos
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.05
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																							
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																							
>=0m, <1m																							
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NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																							
BH38	0.4	09 Dec 2022	Soil	Natural	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH39	0.3	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	09 Dec 2022	Soil	Fill	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1	-	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	-	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	-	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	-	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	-	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	-	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bio
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						Organochlorine Pesticides																						
						4,4-DDE	a-BHC	Aldrin	Dieldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										10		90						600	400				20				10		15	500
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														
>=0m, <1m																														
>=1m, <2m																														
>=2m, <4m																														
>=4m																														
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																	180													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																														
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number																									
BH01	0.1	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH01	1.1	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	0.1	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	1	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH03	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	0.15	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	1	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH06	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	1	05 Dec 2022	Soil	Fill	312405-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	0.5	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH13	2.7	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	0.1	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1

Table 1
Soil Results - High Density Residential Land Use

						Organochlorine Pesticides																						
						4,4-DDE	a-BHC	Aldrin	Dieldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										10		90						600	400				20				10		15	500
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														
>=0m, <1m																														
>=1m, <2m																														
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NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																	180													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																														
BH15	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	0.2	0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH16	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	0.4	0.4	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	<0.1	<0.1	<0.1	0.1	0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	<0.1	<0.1	<0.1	0.8	0.8	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	0.8	0.8	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	0.2	0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	0.2	0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	0.2	0.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH24	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.15	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	1.2	1.2	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.1	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH30	1	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH33	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.5	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.7	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.25	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	<0.1	0.3	0.3	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.4	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	0.3	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<0.1	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1

Table 1
Soil Results - High Density Residential Land Use

						Organochlorine Pesticides																						
						4,4-DDE	a-BHC	Aldrin	Dieldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										10		90						600	400				20				10		15	500
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																														
>=0m, <1m																														
>=1m, <2m																														
>=2m, <4m																														
>=4m																														
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																	180													
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																														
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																														
BH38	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39	0.3	09 Dec 2022	Soil	Natural	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH40	0.25	09 Dec 2022	Soil	Fill	312813	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<0.1	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.3	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH45	0.2	07 Dec 2022	Soil	Fill	312652	<1	<1	<1	**2.3**	-	<1	-	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	<0.1	**8.2**	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	**0.2**	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH46	1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
BH47	1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
SS1	-	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DUP01	-	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DUP02	-	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DUP03	-	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DUP04	-	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	<0.1	**0.1**	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
DUP05	-	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	<0.1	**0.4**	-	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	<0.05	<0.05	<0.05	**0.09**	**0.09**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	<0.05	<0.05	<0.05	**0.19**	**0.19**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and shou
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						Organophosphorous Pesticides															Pesticides		PCBs							
						Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Parathion	Prothiofos	Ronnel	Demeton-S-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.2	0.2	0.1	0.05	0.1	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										340																					1[#6]
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																															
>=0m, <1m																															
>=1m, <2m																															
>=2m, <4m																															
>=4m																															
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																															
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number																										
BH01	0.1	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01	1.1	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	0.1	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	1	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	0.15	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	1	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	1	05 Dec 2022	Soil	Fill	312405-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	0.5	05 Dec 2022	Soil	Natural	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	0.5	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13	2.7	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	0.1	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						Organophosphorous Pesticides																Pesticides		PCBs							
						Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Parathion	Prothiofos	Ronnel	Demeton-S-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.2	0.2	0.1	0.05	0.1	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										340																					1[#6]
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																															
>=0m, <1m																															
>=1m, <2m																															
>=2m, <4m																															
>=4m																															
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																															
BH15	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.15	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.1	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30	1	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH33	0.5	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.1	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.5	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.7	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.25	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.4	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	-	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<0.1

Table 1
Soil Results - High Density Residential Land Use

						Organophosphorous Pesticides																Pesticides		PCBs							
						Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Parathion	Prothiofos	Ronnel	Demeton-S-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.2	0.2	0.1	0.05	0.1	0.05	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)										340																					1 [#6]
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																															
>=0m, <1m																															
>=1m, <2m																															
>=2m, <4m																															
>=4m																															
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																															
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																															
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																															
BH38	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39	0.3	09 Dec 2022	Soil	Natural	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH40	0.25	09 Dec 2022	Soil	Fill	312813	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	-	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<0.1
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	09 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.1	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.3	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH45	0.2	07 Dec 2022	Soil	Fill	312652	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	-	<1	-	-	<1	-	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH46	1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH47	1	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SS1	-	08 Dec 2022	Soil	Fill	312813	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP01	-	05 Dec 2022	Soil	Fill	312405	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP02	-	06 Dec 2022	Soil	Natural	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP03	-	06 Dec 2022	Soil	Fill	312491	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP04	-	07 Dec 2022	Soil	Fill	312652	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DUP05	-	16 Dec 2022	Soil	Fill	313427	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	<0.1
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	<0.1
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	<0.1
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	<0.1
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.2	<0.2	<0.2	<0.05	-	<0.05	<0.05	-	-	-	-	-	-	-	<0.1
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and shou
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						PFAS														
						Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0001	0.005	0.0005	0.0005
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)								**2**		**2**						**20**						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m										**0.01**						**10**						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
Field ID	**Depth**	**Date**	**Matrix Type**	**atrix Descripti**	**Lab Report Number**																	
BH01	**0.1**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	**1.1**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**0.1**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH02	**1**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**2**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH03	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.15**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**1**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**1**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**3**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	<0.0001	<0.0001	<0.0001	<0.0001	**0.0009**	<0.0002	<0.0002	**0.0001**	<0.0002	**0.0001**	**0.0003**	**0.001**	<0.0005	**0.0002**	<0.005	<0.0005	<0.0005
BH06	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**1**	**05 Dec 2022**	**Soil**	**Fill**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.5**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH09	**0.5**	**06 Dec 2022**	**Soil**	**Fill**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**4**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	**0.1**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.5**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**2**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH13	**2.7**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.1**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

						PFAS														
						Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0001	0.005	0.0005	0.0005
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)								**2**		**2**						**20**						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m										**0.01**						**10**						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
BH15	**0.5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**07 Dec 2022**	**Soil**	**Natural**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**2**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	**0.1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**16 Dec 2022**	**Soil**	**Natural**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**1**	**16 Dec 2022**	**Soil**	**Natural**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**16 Dec 2022**	**Soil**	**Natural**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	**0.1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	**2.8**	**16 Dec 2022**	**Soil**	**Natural**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	**0.5**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	**1**	**16 Dec 2022**	**Soil**	**Natural**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	**0.1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	**0.1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH24	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	**0.15**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	**0.1**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	**1**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	**0.5**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH28	**1**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	**4**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	**1**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	**0.5**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH31	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	**4**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	**5**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	**0.1**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	**0.3**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	**0.0009**	<0.0001	<0.005	<0.0005	<0.0005
BH32	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	**0.5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	**0.1**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	**0.5**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	**0.5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	**0.7**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	**0.4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	**0.2**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	**0.35**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	**0.15**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						PFAS															
						Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0001	0.005	0.0005	0.0005
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)								2		2						20						
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																						
>=0m, <1m																						
>=1m, <2m																						
>=2m, <4m																						
>=4m																						
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																						
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m										0.01						10						
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																						
BH38	0.4	09 Dec 2022	Soil	Natural	312813	0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005	<0.0005	<0.0005
BH39	0.3	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.5	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1	-	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	-	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	-	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	-	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	-	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	-	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP01	-	05 Dec 2022	Soil	QAQC	ES2244462	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP02	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP03	-	06 Dec 2022	Soil	QAQC	ES2244460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP04	-	07 Dec 2022	Soil	QAQC	ES2244672	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP05	-	16 Dec 2022	Soil	QAQC	ES2245999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	-	05 Dec 2022	Soil	QAQC	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc l
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bic
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a s
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 1
Soil Results - High Density Residential Land Use

						PFAS													
						4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0002	0.0002	0.001	0.001	0.0002	0.001	0.001	0.0002	0.005	0.0001	0.0001	0.0001
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																	2		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			
Field ID	Depth	Date	Matrix Type	atrix Descripti	Lab Report Number														
BH01	0.1	08 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	1.1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0.1	08 Dec 2022	Soil	Fill	312813	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH02	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	2	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0001**	**0.0001**	<0.0001
BH03	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.15	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	1	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	3	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0009**	**0.0025**	**0.0012**
BH06	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	1	05 Dec 2022	Soil	Fill	312405-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.5	05 Dec 2022	Soil	Natural	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.1	06 Dec 2022	Soil	Fill	312491	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	4	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.5	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	2	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	<0.0001	<0.0001
BH13	2.7	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.1	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

						PFAS													
						4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0002	0.0002	0.001	0.001	0.0002	0.001	0.001	0.0002	0.005	0.0001	0.0001	0.0001
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																	2		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			
BH15	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	16 Dec 2022	Soil	Natural	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	<0.0001	<0.0001
BH24	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH28	1	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0002**	**0.0002**	**0.0002**
BH31	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	09 Dec 2022	Soil	Fill	312813	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	**0.0009**	<0.0001
BH32	0.4	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	05 Dec 2022	Soil	Fill	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	09 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1
Soil Results - High Density Residential Land Use

REDITUS

						PFAS													
						4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.0001	0.0001	0.0002	0.0002	0.001	0.001	0.0002	0.001	0.001	0.0002	0.005	0.0001	0.0001	0.0001
NEPM 2013 Table 1A(1) HILs Res B Soil & PFAS NEMP (2020)																	**2**		
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay																			
>=0m, <1m																			
>=1m, <2m																			
>=2m, <4m																			
>=4m																			
NEPM 2013 Table 1B(5) Generic EIL - Urban Res & Public Open Space																			
NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil & PFAS NEMP (2020), 0-2 m																			
NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil																			
BH38	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0002**	**0.0003**	**0.0002**
BH39	**0.3**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	**0.5**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	**0.25**	**09 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	**0.4**	**09 Dec 2022**	**Soil**	**Natural**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	**0.1**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	**0.3**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.25**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	**0.35**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.2**	**07 Dec 2022**	**Soil**	**Fill**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	**0.5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	**1**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1	**-**	**08 Dec 2022**	**Soil**	**Fill**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP01	**-**	**05 Dec 2022**	**Soil**	**Fill**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP02	**-**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP03	**-**	**06 Dec 2022**	**Soil**	**Fill**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP04	**-**	**07 Dec 2022**	**Soil**	**Fill**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP05	**-**	**16 Dec 2022**	**Soil**	**Fill**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP01	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**ES2244462**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP02	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP03	**-**	**06 Dec 2022**	**Soil**	**QAQC**	**ES2244460**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP04	**-**	**07 Dec 2022**	**Soil**	**QAQC**	**ES2244672**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP05	**-**	**16 Dec 2022**	**Soil**	**QAQC**	**ES2245999**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank 1	**-**	**05 Dec 2022**	**Soil**	**QAQC**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
ND = Non-detect
#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and sho
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bio
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be c
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#10 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 ye
#11 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 frac
#12 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#13 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtra
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatis

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Res B Soil
2013, NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Urban Res, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Fine Soil
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 2
Soil Results - Commerical/Industrial Land Use

REDITUS

							BTEX								TRH							TPH				
							Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
							mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL							1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay																										
>=0m, <1m							NL [#7]	4	NL [#7]	NL [#7]			NL [#7]			310[#8]		NL [#7]								
>=1m, <2m							NL	6	NL	NL			NL			480		NL								
>=2m, <4m							NL	9	NL	NL			NL			NL [#7]		NL								
>=4m							NL	20	NL	NL			NL			NL		NL								
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil															800[#14]		1,000[#14]		5,000	10,000						
CRC Care HSL-D Commercial / Industrial							11,000	430	99,000	27,000			81,000		26,000		20,000		27,000	38,000						
Field ID	**Depth**	**Date**	**Matrix Type**	**Matrix Description**	**LBR**																					
BH01	0.1	08 Dec 2022	Soil	Fill	312813		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH01	1.1	08 Dec 2022	Soil	Natural	312813		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	0.1	08 Dec 2022	Soil	Fill	312813		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	1	08 Dec 2022	Soil	Natural	312813		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH02	2	08 Dec 2022	Soil	Natural	312813		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	08 Dec 2022	Soil	Natural	312813		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH03	0.5	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	0.15	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	0.5	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH04	1	05 Dec 2022	Soil	Natural	312405		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**160**	<100	**160**	<25	<50	<100	**100**	**100**
BH05	1	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH05	3	05 Dec 2022	Soil	Natural	312405		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	05 Dec 2022	Soil	Natural	312405		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH06	0.5	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH06 - [TRIPLICATE]	0.5	05 Dec 2022	Soil	Natural	312405		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**300**	<100	**300**	<25	<50	**170**	**180**	**340**
BH07	1	05 Dec 2022	Soil	Fill	312405-A		-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH08	0.1	05 Dec 2022	Soil	Fill	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**230**	<100	**230**	<25	<50	**130**	**130**	**260**
BH08	0.5	05 Dec 2022	Soil	Natural	312405		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH09	0.1	06 Dec 2022	Soil	Fill	312491		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**170**	<100	**170**	<25	<50	<100	**110**	**110**
BH09	0.5	06 Dec 2022	Soil	Fill	312491-A		-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	06 Dec 2022	Soil	Natural	312491		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH09	4	06 Dec 2022	Soil	Natural	312491		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	06 Dec 2022	Soil	Natural	312491		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	09 Dec 2022	Soil	Fill	312813		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	**180**	**270**	**450**	<25	<50	<100	**140**	**140**
BH11 - [TRIPLICATE]	0.1	09 Dec 2022	Soil	Fill	312813		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	07 Dec 2022	Soil	Fill	312652		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH12	0.5	07 Dec 2022	Soil	Fill	312652		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH12	2	07 Dec 2022	Soil	Natural	312652		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	07 Dec 2022	Soil	Natural	312652		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	07 Dec 2022	Soil	Natural	312652		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	06 Dec 2022	Soil	Fill	312491		<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50

Table 2
Soil Results - Commerical/Industrial Land Use

						BTEX								TRH							TPH				
						Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay																									
>=0m, <1m						NL [#7]	4	NL [#7]	NL [#7]			NL [#7]			310 [#8]		NL [#7]								
>=1m, <2m						NL	6	NL	NL			NL			480		NL								
>=2m, <4m						NL	9	NL	NL			NL			NL [#7]		NL								
>=4m						NL	20	NL	NL			NL			NL		NL								
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil														800 [#14]		1,000 [#14]		5,000	10,000						
CRC Care HSL-D Commercial / Industrial						11,000	430	99,000	27,000			81,000		26,000		20,000		27,000	38,000						
BH13	2.7	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH14	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	53	53	1,800	1,200	3,000	<25	<50	970	1,100	2,100
BH14	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH15	0.1	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH15	0.5	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH15	3	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	07 Dec 2022	Soil	Natural	312652-A	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	07 Dec 2022	Soil	Natural	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	810	1,100	1,900	<25	<50	260	820	1,100
BH16	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH17	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	290	<100	290	<25	<50	140	190	340
BH17	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH17	2	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	200	160	360	<25	<50	110	140	240
BH18 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	16 Dec 2022	Soil	Natural	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH19	1	16 Dec 2022	Soil	Natural	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH20	0.1	16 Dec 2022	Soil	Natural	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH21	0.1	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH21	2.8	16 Dec 2022	Soil	Natural	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH22	0.5	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH22	1	16 Dec 2022	Soil	Natural	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH23	0.1	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH23 - [TRIPLICATE]	0.1	16 Dec 2022	Soil	Fill	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	240	<100	240	<25	<50	180	<100	180
BH24	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH25	0.15	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH25	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH26	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	150	<100	150	<25	<50	110	<100	110
BH26	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	0.1	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH27	1	06 Dec 2022	Soil	Natural	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	08 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH28	1	08 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH28	3	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH29	0.4	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH30	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	180	<100	180	<25	<50	<100	110	110
BH30	1	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH30 - [TRIPLICATE]	0.1	06 Dec 2022	Soil	Fill	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	08 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH31	3	08 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH31	4	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	08 Dec 2022	Soil	Natural	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH32	0.3	09 Dec 2022	Soil	Fill	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH33	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH33	0.5	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH34	0.1	05 Dec 2022	Soil	Fill	312405	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	200	<100	200	<25	<50	130	<100	130
BH34	0.5	05 Dec 2022	Soil	Fill	312405	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH35	0.5	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50

Table 2
Soil Results - Commerical/Industrial Land Use

REDITUS

						BTEX								TRH							TPH				
						Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						1	0.2	0.5	0.5	0.5	0.5	0.5	0.2	10	10	50	50	100	100	50	10	50	100	100	50
NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay																									
>=0m, <1m						NL [#7]	4	NL [#7]	NL [#7]			NL [#7]			310 [#8]		NL [#7]								
>=1m, <2m						NL	6	NL	NL			NL			480		NL								
>=2m, <4m						NL	9	NL	NL			NL			NL [#7]		NL								
>=4m						NL	20	NL	NL			NL			NL		NL								
NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil														800 [#14]		1,000 [#14]		5,000	10,000						
CRC Care HSL-D Commercial / Industrial						11,000	430	99,000	27,000			81,000		26,000		20,000		27,000	38,000						
BH35	0.7	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH36	0.25	07 Dec 2022	Soil	Fill	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	110	<100	110	<25	<50	<100	<100	<50
BH36	0.4	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH36 - [TRIPLICATE]	0.25	07 Dec 2022	Soil	Fill	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH37	0.35	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH38	0.15	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	360	360	12,000	2,700	15,000	<25	140	7,700	5,300	13,000
BH38	0.4	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	670	110	780	<25	<50	450	260	710
BH39	0.3	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH40	0.25	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	220	220	5,900	910	7,000	<25	120	4,100	2,200	6,400
BH40	0.5	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	400	110	510	<25	<50	260	190	450
BH41	0.25	09 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH41	0.4	09 Dec 2022	Soil	Natural	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH42	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	120	<100	120	<25	<50	<100	<100	<50
BH43	0.1	06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	130	<100	130	<25	<50	<100	<100	<50
BH43	0.3	06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH44	0.25	07 Dec 2022	Soil	Fill	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH44	0.25	07 Dec 2022	Soil	Fill	312652-A	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH45	0.2	07 Dec 2022	Soil	Fill	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	300	300	12,000	2,200	15,000	<25	140	8,400	4,900	13,000
BH45	0.2	07 Dec 2022	Soil	Fill	312652-A	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	07 Dec 2022	Soil	Natural	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	100	<100	100	<25	<50	<100	<100	<50
BH46	1	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
BH47	1	16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP01		05 Dec 2022	Soil	Fill	312405	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	290	<100	290	<25	<50	170	160	330
DUP02		06 Dec 2022	Soil	Natural	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP03		06 Dec 2022	Soil	Fill	312491	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	52	52	210	<100	260	<25	54	120	130	300
DUP04		07 Dec 2022	Soil	Fill	312652	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
DUP05		16 Dec 2022	Soil	Fill	313427	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
SS1		08 Dec 2022	Soil	Fill	312813	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	<50	<50	<100	<100	<50	<25	<50	<100	<100	<50
TRIP01		05 Dec 2022	Soil		ES2244462	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	200	100	300	<10	<50	120	130	250
TRIP02		06 Dec 2022	Soil		ES2244460	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP03		06 Dec 2022	Soil		ES2244460	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP04		07 Dec 2022	Soil		ES2244672	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP05		16 Dec 2022	Soil		ES2245999	<1	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<10	<10	<50	<50	260	210	470	<10	<50	110	240	350
Trip Blank 1		05 Dec 2022	Soil		312405	<1	<0.2	<0.5	<1	<2	<1	<1	-	<25	<25	-	-	-	-	-	<25	-	-	-	-

Comments

#1 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sample by its BaP TEF (ref Table 1A(1)) & summing
#2 Total PAHs: Based on sum of 16 most common reported (WHO 98). HIL application should consider presence of carcinogenic PAHs (should meet BaP TEQ HIL) & napthalene (should meet relevant HSL)
#3 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Shedule B7).
#4 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability should be considered where appropriate.
#5 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspected to be present.
#6 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (inc dioxin like PCBs) should be undertaken
#7 Derived soil HSL exceeds soil saturation concentraiton
#8 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#9 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
#10 Moderate reliability. To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#11 ERRATA Updated 30 April 2014 . Naphthalene should not be subtracted.
#12 Errata 30 April 2014. Naphthalene should not be subtracted from >C
#13 Revised as per NEPC errata 6 Feb 2014
#14 Separate management limits for BTEX & naphthalene are not available hence should not be subtracted from the relevant fractions to obtain F1 & F2
#15 Chromium (VI) HIL criteria has been applied to concentrations of Chromium (III+VI) for conservatism

Environmental Standards

2013, NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil
2013, NEPM 2013 Table 1A(3) Comm/Ind D Soil HSL for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1B(6) ESLs for Comm/Ind, Fine Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits Comm / Ind, Fine Soil
CRC Care, 2011, CRC Care HSL-D Commercial / Industrial
HEPA, January 2020, PFAS NEMP 2020 Version 2.0

Table 3
Groundwater Results

	BTEX								TRH							TPH				
	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL	1	1	1	1	2	1	2	1	10	10	50	50	100	100	50	10	50	100	50	50
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																				
>=2m, <4m	**NL**	**5,000**	**NL**	**NL**			**NL**			**NL [#1]**		**NL [#2]**								
>=4m, <8m	**NL**	**5,000**	**NL**	**NL**			**NL**			**NL**		**NL**								
>=8m	**NL**	**5,000**	**NL**	**NL**			**NL**			**NL**		**NL**								
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																				
>=2m, <4m	**NL**	**30,000**	**NL**	**NL**			**NL**			**NL [#1]**		**NL [#2]**								
>=4m, <8m	**NL**	**30,000**	**NL**	**NL**			**NL**			**NL**		**NL**								
>=8m	**NL**	**35,000**	**NL**	**NL**			**NL**			**NL**		**NL**								
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)	**70 [#11]**	**700 [#11]**	**180 [#5]**	**80 [#5]**																
PFAS NEMP 2020 Interim Marine 95%																				
PFAS NEMP 2020 Interim Marine 99%																				
Recreational Water Guidelines		**10**	**8000**	**3,000**			**6,000**													
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																	
EW1	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
EW2	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
EW3	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW01	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW02	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	**110**	**110**	<100	<100	**110**	<10	**85**	<100	<100	**80**
MW03	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	**530**	**530**	<100	<100	**530**	<10	**460**	<100	<100	**460**
MW04	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW05	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW06	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW07	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
MW08	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
DUP1	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
TRIP1	**20 Dec 2022**	**Water**	**ES2246531**	<5	<1	<2	<2	<2	<2	<2	<1	<20	<20	<100	<100	<100	<100	<100	<20	<50	<100	<50	<50
Trip Blank	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<2	<1	-	-	<10	<10	-	-	-	-	-	<10	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
#5 Unknown reliability. Recommended for application for slightly to moderately disturbed ecosystems.
#6 Unknown reliability
#7 Very high reliability
#8 High reliability
#9 Low reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.
#10 Very Low reliability
#11 Moderate reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.
#12 High reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.
#13 Unknown reliability. DGV may not protect key test species from chronic toxicity. Check toxicant DGV technical brief and Read the detail, below, for spread of data and its significance.
#14 Insufficient data to set a guideline value based on health considerations
#15 No corresponding fact sheet for these pesticides. Guideline values for these pesticides appeared in a previous version of the ADWG and have been retained in Table 10.5 for information purposes only

Environmental Standards
2013, NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs (March 2021)
ANZG, March 2021, ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 95%
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath guidelines by a factor of 10 (excluding 'Sum of PFHxS and PFOS' obtained from PFAS NEMP 2020/NHMRC 2019)

Table 3
Groundwater Results

REDITUS

	PAH																				Inorganics
	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ	PAHs (Sum of total)	PAHs (Sum of positives)	Cyanide Total
	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL	2	1	1	1	1	0.5	1	1	1	1	1	1	1	1	1	1	1	5	0.5	1	4
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																					
>=2m, <4m															NL						
>=4m, <8m															NL						
>=8m															NL						
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																					
>=2m, <4m															NL						
>=4m, <8m															NL						
>=8m															NL						
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)				**0.4**[#6]		**0.2**[#6]						**1.4**[#6]			**70**[#11]	**2**[#6]					
PFAS NEMP 2020 Interim Marine 95%																					
PFAS NEMP 2020 Interim Marine 99%																					
Recreational Water Guidelines						**0.1**															**800**
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																		
EW1	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
EW2	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
EW3	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
MW01	**19 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
MW02	**19 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
MW03	**19 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	<4
MW04	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	<4
MW05	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
MW06	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	<4
MW07	**19 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
MW08	**19 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
DUP1	**20 Dec 2022**	**Water**	**313723**	<2	<1	<1	<1	<1	<1	-	<1	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	-	**0**	-
TRIP1	**20 Dec 2022**	**Water**	**ES2246531**	-	<1.0	<1.0	<1.0	<1.0	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<0.5	-	-
Trip Blank	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
#5 Unknown reliability. Recommended for application for slightly to moderately disturbed ecos
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#10 Very Low reliability
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#12 High reliability. DGV may not protect key test species from chronic toxicity (this refers to ex
#13 Unknown reliability. DGV may not protect key test species from chronic toxicity. Check toxic
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2013, NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay
2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs (March 2021)
ANZG, March 2021, ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 95%
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath gui

Table 3
Groundwater Results

				Metals								Phenols	PCBs						
				Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)	Phenolics Total	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL				1	0.1	1	1	1	0.05	1	1	50	2	2	2	2	2	2	2
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)				24#16	5.5[#12]	1	1.3[#7]	4.4[#3]	0.4[#7]	70[#8]	8[#7]								
PFAS NEMP 2020 Interim Marine 95%																			
PFAS NEMP 2020 Interim Marine 99%																			
Recreational Water Guidelines				100	20	0.5	20,000	100	10	200	[#14]								
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																
EW1	20 Dec 2022	Water	313723	<1	<0.1	<1	<1	<1	<0.05	11	26	-	-	-	-	-	-	-	-
EW2	20 Dec 2022	Water	313723	1	<0.1	<1	<1	<1	<0.05	13	43	-	-	-	-	-	-	-	-
EW3	20 Dec 2022	Water	313723	<1	<0.1	<1	<1	<1	<0.05	<1	<1	-	-	-	-	-	-	-	-
MW01	19 Dec 2022	Water	313723	1	0.2	<1	4	<1	<0.05	11	38	-	-	-	-	-	-	-	-
MW02	19 Dec 2022	Water	313723	<1	0.5	<1	5	<1	<0.05	51	160	-	-	-	-	-	-	-	-
MW03	19 Dec 2022	Water	313723	<1	0.4	<1	2	<1	<0.05	51	170	<50	<2	<2	<2	<2	<2	<2	<2
MW04	20 Dec 2022	Water	313723	3	1.1	<1	1	<1	<0.05	55	120	<50	<2	<2	<2	<2	<2	<2	<2
MW05	20 Dec 2022	Water	313723	<1	<0.1	<1	<1	<1	<0.05	6	<1	-	-	-	-	-	-	-	-
MW06	20 Dec 2022	Water	313723	2	<0.1	<1	<1	<1	<0.05	5	12	<50	<2	<2	<2	<2	<2	<2	<2
MW07	19 Dec 2022	Water	313723	1	0.6	<1	2	<1	<0.05	33	89	-	-	-	-	-	-	-	-
MW08	19 Dec 2022	Water	313723	<1	<0.1	<1	2	<1	<0.05	7	58	-	-	-	-	-	-	-	-
DUP1	20 Dec 2022	Water	313723	2	<0.1	<1	<1	<1	<0.05	7	18	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	<1	<0.1	<1	<1	<1	<0.1	5	<5	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
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#6 Unknown reliability
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HEPA, January 2020, PFAS NEMP 2020 Interim Marine 95%
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
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Table 3
Groundwater Results

				VOCs																
				1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																				
>=2m, <4m																				
>=4m, <8m																				
>=8m																				
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																				
>=2m, <4m																				
>=4m, <8m																				
>=8m																				
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)					270[#5]	400[#5]	1,900[#10]		700[#5]				80[#4]					1,900[#5]	900[#5]		
PFAS NEMP 2020 Interim Marine 95%																					
PFAS NEMP 2020 Interim Marine 99%																					
Recreational Water Guidelines					[#14]			[#14]	300							10[#15]	15,000	30			[#14]
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																		
EW1	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
EW2	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
EW3	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW01	19 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW02	19 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW03	19 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW04	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW05	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW06	20 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW07	19 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
MW08	19 Dec 2022	Water	313723	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
DUP1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
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2013, NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay
ANZG, March 2021, ANZG (2018) Freshwater 95% LOSP Toxicant DGVs (March 2021)
ANZG, March 2021, ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 95%
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath guic

Table 3
Groundwater Results

REDITUS

				VOCs																
				1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL				1	1	1	1	1	1	1	1	1	10	1	1	1	10	1	10	1	1
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																					
>=2m, <4m																					
>=4m, <8m																					
>=8m																					
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																					
>=2m, <4m																					
>=4m, <8m																					
>=8m																					
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)				1,100[#5]										240[#5]	55[#5]			770[#13]			
PFAS NEMP 2020 Interim Marine 95%																					
PFAS NEMP 2020 Interim Marine 99%																					
Recreational Water Guidelines					400								10	30	3,000						
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																		
EW1	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
EW2	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
EW3	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW01	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW02	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW03	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW04	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW05	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW06	**20 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW07	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
MW08	**19 Dec 2022**	**Water**	**313723**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<10	<1	<10	<1	<1
DUP1	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	**20 Dec 2022**	**Water**	**ES2246531**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
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HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath guic

Table 3
Groundwater Results

				VOCs															
				Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL				1	1	10	1	1	1	1	1	1	1	1	1	1	1	1	10	10
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																				
>=2m, <4m																				
>=4m, <8m																				
>=8m																				
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																				
>=2m, <4m																				
>=4m, <8m																				
>=8m																				
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)								30 #5						330 #5		70 #5				100 #5
PFAS NEMP 2020 Interim Marine 95%																				
PFAS NEMP 2020 Interim Marine 99%																				
Recreational Water Guidelines							7						300	#14		500				3
Field ID	Date	Matrix Type	Lab Report Number																	
EW1	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
EW2	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
EW3	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW01	19 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW02	19 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW03	19 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW04	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW05	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW06	20 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW07	19 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
MW08	19 Dec 2022	Water	313723	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<10	<10
DUP1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
#5 Unknown reliability. Recommended for application for slightly to moderately disturbed ecos
#6 Unknown reliability
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HEPA, January 2020, PFAS NEMP 2020 Interim Marine 95%
HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath guic

Table 3
Groundwater Results

REDITUS

				Organochlorine Pesticides																		
				4,4-DDE	a-BHC	Aldrin	Dieldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
			EQL	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																							
>=2m, <4m																							
>=4m, <8m																							
>=8m																							
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																							
>=2m, <4m																							
>=4m, <8m																							
>=8m																							
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)																	0.008 [#4]					0.1 [#6]	
PFAS NEMP 2020 Interim Marine 95%																							
PFAS NEMP 2020 Interim Marine 99%																							
Recreational Water Guidelines													90						100	3			[#15]
Field ID	**Date**	**Matrix Type**	**Lab Report Number**																				
EW1	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW2	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW3	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	**19 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02	**19 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW03	**19 Dec 2022**	**Water**	**313723**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW04	**20 Dec 2022**	**Water**	**313723**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW05	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW06	**20 Dec 2022**	**Water**	**313723**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW07	**19 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW08	**19 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP1	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	**20 Dec 2022**	**Water**	**ES2246531**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	**20 Dec 2022**	**Water**	**313723**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
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HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
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Table 3
Groundwater Results

				Organophosphorous Pesticides												
				Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL				0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay															
>=2m, <4m															
>=4m, <8m															
>=8m															
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay															
>=2m, <4m															
>=4m, <8m															
>=8m															
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)						0.009[#3]									
PFAS NEMP 2020 Interim Marine 95%															
PFAS NEMP 2020 Interim Marine 99%															
Recreational Water Guidelines				300	100[#15]	100		40	50	70	40	70	700	200	[#14]
Field ID	**Date**	**Matrix Type**	**Lab Report Number**												
EW1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
EW2	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
EW3	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
MW01	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
MW02	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
MW03	19 Dec 2022	Water	313723	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW04	20 Dec 2022	Water	313723	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW05	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
MW06	20 Dec 2022	Water	313723	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MW07	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
MW08	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
DUP1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
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HEPA, January 2020, PFAS NEMP 2020 Interim Marine 99%
NHMRC, May 2022, ADWG 2022 Health
* Recreational Water Guideline values have been derived by multiplying ADWG 2022 Heath guic

Table 3
Groundwater Results

REDITUS

				PFAS															
				Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
			EQL	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.02	0.05	0.01	0.5	0.1
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																			
>=2m, <4m																			
>=4m, <8m																			
>=8m																			
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)																			
PFAS NEMP 2020 Interim Marine 95%								0.13						220					
PFAS NEMP 2020 Interim Marine 99%								0.00023						19					
Recreational Water Guidelines														10					
Field ID	Date	Matrix Type	Lab Report Number																
EW1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW2	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW3	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW03	19 Dec 2022	Water	313723	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	**0.06**	**0.20**	**0.23**	**0.06**	**0.01**	<0.02	<0.05	<0.01	<0.5	<0.1
MW04	20 Dec 2022	Water	313723	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.01	<0.02	<0.05	<0.01	<0.5	<0.1
MW05	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW06	20 Dec 2022	Water	313723	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.02	<0.01	<0.01	<0.02	<0.05	<0.01	<0.5	<0.1
MW07	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW08	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
#1 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#2 To obtain F2 subtract napthalene from the >C10 - C16 fraction.
#3 Low reliability
#4 Moderate reliability
#5 Unknown reliability. Recommended for application for slightly to moderately disturbed ecos
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Table 3
Groundwater Results

REDITUS

				PFAS														
				Perfluoroundecanoic acid (PFUnDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
			EQL	0.02	0.01	0.01	0.02	0.02	0.1	0.05	0.02	0.05	0.1	0.02	0.5	0.01	0.01	0.01
NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay																		
>=2m, <4m																		
>=4m, <8m																		
>=8m																		
NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay																		
>=2m, <4m																		
>=4m, <8m																		
>=8m																		
ANZG (2018) Marine Water 95% LOSP Toxicant DGVs (March 2021)																		
PFAS NEMP 2020 Interim Marine 95%																		
PFAS NEMP 2020 Interim Marine 99%																		
Recreational Water Guidelines																2		
Field ID	**Date**	**Matrix Type**	**Lab Report Number**															
EW1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW2	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EW3	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW01	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW02	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW03	19 Dec 2022	Water	313723	<0.02	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	**0.56**	**0.01**
MW04	20 Dec 2022	Water	313723	<0.02	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	<0.01	<0.01
MW05	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW06	20 Dec 2022	Water	313723	<0.02	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	<0.01	<0.01	<0.01
MW07	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW08	19 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DUP1	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIP1	20 Dec 2022	Water	ES2246531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trip Blank	20 Dec 2022	Water	313723	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Comments
NL = No Limit
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NHMRC, May 2022, ADWG 2022 Health
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Table 4
Soil Vapour Results

	BTEX					TRH		TPH			PAH	Inorganics
	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2 minus Naphthalene)	Aliphatic >C5-C8	Aliphatic >C9-C12	Aromatic >C9-C10	Naphthalene	Nitrogen (Total)
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	mg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	%
EQL	1.6	1.9	2.2	4.3	2.2	0.2	40	200	50	100	2.6	
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m	40,000	53,000,000	16,000,000			9,900					45,000	
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m	230,000					55,000					240,000	
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs												
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs												
USEPA RSLs Resident Air THQ=1.0					1,000							
USEPA RSLs Industrial Air THQ=1.0					4,400							
Field ID	**Date**	**Matrix Type**										
MW01	**09 Feb 2023**	**SoilGas**	**59**	**2,100**	**490**	**1,700**	**620**	**3.8**	**1,900**	**5,200**	**870**	**2,500**	**20**	**76**
MW08	**09 Feb 2023**	**SoilGas**	**6**	**45**	**170**	**130**	**64**	**0.51**	**410**	**1,000**	**480**	*<100*	**4**	**73**

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 4
Soil Vapour Results

			VOCs											
			1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene
			µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL			2.7	3.4	2.7	2	2	3.7	2.5	3.8	3	2	2.3	2.5	3
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs			60,000												
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs			230,000												
USEPA RSLs Resident Air THQ=1.0									630					630	
USEPA RSLs Industrial Air THQ=1.0									2600					2600	
Field ID	**Date**	**Matrix Type**													
MW01	**09 Feb 2023**	**SoilGas**	*<2.7*	*<3.4*	*<2.7*	*<2*	*<2*	*<3.7*	**690**	*<3.8*	*<3*	*<2*	*<2.3*	**220**	*<3*
MW08	**09 Feb 2023**	**SoilGas**	*<2.7*	*<3.4*	*<2.7*	*<2*	*<2*	*<3.7*	**42**	*<3.8*	*<3*	*<2*	*<2.3*	**10**	*<3*

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 4
Soil Vapour Results

	VOCs												
	Acrolein	1,4-dichlorobenzene	1-methyl-4 ethyl benzene	Benzyl chloride	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL	11	3	2.5	2.6	3.4	5.2	1.9	3.1	2.3	1.6	1.3	2.4	1
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m													
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m													
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs													
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs													
USEPA RSLs Resident Air THQ=1.0												12	94
USEPA RSLs Industrial Air THQ=1.0												53	390
Field ID **Date** **Matrix Type**													
MW01 **09 Feb 2023** **SoilGas**	*<11*	*<3*	**230**	*<2.6*	*<3.4*	*<5.2*	*<1.9*	*<3.1*	*<2.3*	*<1.6*	*<1.3*	**8**	**17**
MW08 **09 Feb 2023** **SoilGas**	*<11*	*<3*	**20**	*<2.6*	*<3.4*	*<5.2*	*<1.9*	*<3.1*	*<2.3*	*<1.6*	*<1.3*	**3**	**14**

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 4
Soil Vapour Results

	VOCs														
	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Cyclohexane	Dichlorodifluoromethane	Dichloromethane		Freon 113	Hexachlorobutadiene	Styrene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	ppbv	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL	2	2.3	1.7	2.5	17		3.8	5.3	2.1	2.7	3.4	2	2.3	2.8	1.3
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs	80									20	2,000				30
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs	300									80	8,000				100
USEPA RSLs Resident Air THQ=1.0			6,300						10,000						
USEPA RSLs Industrial Air THQ=1.0			26,000						44,000						
Field ID	**Date**	**Matrix Type**													
MW01	**09 Feb 2023**	**SoilGas**	*<2*	*<2.3*	**160**	*<2.5*	*<17*	*<5*	*<3.8*	*<5.3*	**9**	*<2.7*	*<3.4*	*<2*	*<2.3*	*<2.8*	**2**
MW08	**09 Feb 2023**	**SoilGas**	*<2*	*<2.3*	**78**	*<2.5*	*<17*	*<5*	*<3.8*	*<5.3*	**130**	*<2.7*	*<3.4*	*<2*	*<2.3*	*<2.8*	**1**

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 4
Soil Vapour Results

	Solvents														
	1,3-Butadiene	1,4-Dioxane	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Acetone	Carbon disulfide	Ethanol	Ethyl acetate	Heptane	Hexane	MTBE	2-Propanol	Tetrahydrofuran	Vinyl acetate
	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
EQL	1.1	1.8	15	2	20	11.9	16	9	1.8	2	1.8	1.8	12	1.5	1.8
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m															
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs															
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs															
USEPA RSLs Resident Air THQ=1.0							7,300			4,200	1,400		2,100		
USEPA RSLs Industrial Air THQ=1.0							31,000			18,000	6,100		8,800		
Field ID	**Date**	**Matrix Type**													
MW01	**09 Feb 2023**	**SoilGas**	*<1.1*	*<1.8*	*<15*	*<2*	*<20*	**20**	**100**	**60**	*<1.8*	**80**	**150**	*<1.8*	**140**	*<1.5*	*<1.8*
MW08	**09 Feb 2023**	**SoilGas**	*<1.1*	*<1.8*	*<15*	*<2*	*<20*	**50**	**100**	**10**	*<1.8*	**4**	**8**	*<1.8*	**190**	*<1.5*	*<1.8*

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 4
Soil Vapour Results

	Other				NA		Pressure		Organic
	Carbon Dioxide	Carbon Monoxide	Oxygen	Methyl Methacrylate	Freon 114	Propene	Vacuum before Shipment	Vacuum before Analysis	Methane
	% by Vol	% by Vol	% by Vol	µg/m3	µg/m3	µg/m3	Hg"	Hg	%
EQL	0.01	0.01	0.1	2	2.5	0.9			
NEPM 2013 Table 1A(5) Res Soil Vapour HSL A/B for Vapour Intrusion, Clay >=2m, <4m									
NEPM 2013 Table 1A(5) Comm/Ind D Soil Vapour HSL for Vapour Intrusion, Clay >=2m, <4m									
NEPM 2013 Table 1A(2) Res B Soil Vap VOCC HILs									
NEPM 2013 Table 1A(2) Comm/Ind D Soil Vap VOCC HILs									
USEPA RSLs Resident Air THQ=1.0				7,300		31,000			
USEPA RSLs Industrial Air THQ=1.0				31,000		130,000			
Field ID **Date** **Matrix Type**									
MW01 **09 Feb 2023** **SoilGas**	**8.4**	*<0.01*	**3.8**	*<2*	*<2.5*	**79**	**-30**	**-9**	*<0.01*
MW08 **09 Feb 2023** **SoilGas**	**13**	*<0.01*	**2.9**	**2**	*<2.5*	**130**	**-30**	**-11**	*<0.01*

Environmental Standards
USEPA, Nov 2022, USEPA RSLs Resident Air THQ=1.0
USEPA, Nov 2022, USEPA RSLs Industrial Air THQ=1.0

Table 5
Soils Results - Acid Sulfate Soils Assessment

						Acid Sulphate Soils	Acid Sulphate Soils - Acid Base Accounting			Acid Sulphate Soils - Acidity Trail		Acid Sulphate Soils - ANC		Acid Sulphate Soils - Liming Rate		Acid Sulphate Soils - pH	Acid Sulphate Soils - Potential Acidity		Acid Sulphate Soils - Retained Acidity		Acid Sulphate Soils - Sulfur Trail
						s-Net Acidity without ANCE	a-Net Acidity without ANCE	Net Acidity (acidity units)	Net Acidity (sulfur units)	Titratable Actual Acidity (sulfur units)	Titratable Actual Acidity	Acid Neutralising Capacity	Acid Neutralising Capacity (sulfur units)	Liming Rate	Liming Rate excluding ANC	pHKCl	Chromium Reducible Sulphur (acidity units)	Chromium Reducible Sulfur	HCl Extractable Sulfur	Net Acid Soluble Sulfur	KCl Extractable Sulfur
						% S	moles H+/t	mole H+/t	%S	%S	mole H+/t	%CaCO3	%S	kg CaCO3/t	kg CaCO3/t	-	mole H+/t	%w/w	%S	%S	%
EQL						0.005	5	5	0.005	0.01	5	0.05	0.05	0.75	0.75		3		0.005	0.005	0.005
ASSMAC Acid Sulfate Soil Manual (1998) Table 4.4, 1000 tonnes disturbed, coarse soil texture.						0.03	18														
NASS Guidance (2018): National acid sulfate soils identification and laboratory methods manual.																		0.01			
Field ID	**Depth**	**Date**	**Matrix Type**	**Matrix Description**	**Lab Report Number**																
BH02	**2**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.0070**	<5	<5	<0.005	<0.01	<5	**0.40**	**0.13**	<0.75	<0.75	**6.6**	**4**	**0.007**	-	-	-
BH02	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.035**	**22**	**22**	**0.035**	**0.03**	**17**	-	-	**2**	**1.7**	**4.8**	**5**	**0.008**	-	-	-
BH05	**3**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	**0.093**	**58**	**58**	**0.093**	**0.07**	**42**	-	-	**4**	**4.3**	**4.3**	**15**	**0.02**	**0.012**	<0.005	**0.011**
BH05	**4**	**05 Dec 2022**	**Soil**	**Natural**	**312405**	**0.027**	**17**	**17**	**0.027**	**0.03**	**16**	-	-	**1**	**1.3**	**4.6**	<3	<0.005	-	-	-
BH09	**2**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	**0.012**	**7.5**	**7.5**	**0.012**	<0.01	<5	-	-	<0.75	<0.75	**5.4**	**5**	**0.008**	-	-	-
BH09	**4**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	<0.005	<5	<5	<0.005	<0.01	<5	-	-	<0.75	<0.75	**6.5**	<3	<0.005	-	-	-
BH09	**5**	**06 Dec 2022**	**Soil**	**Natural**	**312491**	**0.011**	**6.8**	<5	<0.005	<0.01	<5	**0.70**	**0.22**	<0.75	<0.75	**7.0**	**7**	**0.01**	-	-	-
BH12	**4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	<0.005	<5	<5	<0.005	<0.01	<5	**0.50**	**0.16**	<0.75	<0.75	**6.7**	<3	<0.005	-	-	-
BH12	**5**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	**0.0060**	<5	<5	<0.005	<0.01	<5	**2.2**	**0.72**	<0.75	<0.75	**7.1**	**4**	**0.006**	-	-	-
BH15	**3**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	<0.005	<5	<5	<0.005	<0.01	<5	**0.50**	**0.16**	<0.75	<0.75	**7.2**	<3	<0.005	-	-	-
BH15	**4**	**07 Dec 2022**	**Soil**	**Natural**	**312652**	**0.013**	**8.0**	<5	<0.005	<0.01	<5	**1.9**	**0.61**	<0.75	<0.75	**7.6**	**8**	**0.01**	-	-	-
BH28	**3**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.013**	**8.2**	**8.2**	**0.013**	<0.01	<5	-	-	<0.75	<0.75	**5.8**	**4**	**0.006**	-	-	-
BH28	**4**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.026**	**16**	**16**	**0.026**	**0.02**	**12**	-	-	**1**	**1.2**	**4.7**	**4**	**0.006**	-	-	-
BH31	**4**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.018**	**12**	<5	<0.005	<0.01	<5	**0.50**	**0.16**	<0.75	**0.86**	**6.5**	**12**	**0.02**	-	-	-
BH31	**5**	**08 Dec 2022**	**Soil**	**Natural**	**312813**	**0.077**	**48**	**48**	**0.077**	**0.04**	**26**	-	-	**4**	**3.6**	**4.2**	<3	<0.005	**0.040**	**0.030**	**0.009**

Table 6
Soil RPDs

	Field ID		BH07	DUP01	RPD	BH07	TRIP01	RPD	BH27	DUP02	RPD	BH27	TRIP02	RPD	BH42	DUP03
	Date		05 Dec 2022	05 Dec 2022		05 Dec 2022	05 Dec 2022		06 Dec 2022	06 Dec 2022		06 Dec 2022	06 Dec 2022		06 Dec 2022	06 Dec 2022
	Matrix Type		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil
	Lab Report Number		312405	312405		312405	ES2244462		312491	312491		312491	ES2244460		312491	312491
	Unit	EQL														
BTEX			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene (BTEX)	mg/kg	1	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1
Benzene	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2
Toluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5
Ethylbenzene	mg/kg	0.5	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1
Xylene (m & p)	mg/kg	0.5	<2	<2	0	<2	<0.5	0	<2	<2	0	<2	<0.5	0	<2	<2
Xylene (o)	mg/kg	0.5	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1
Xylene Total	mg/kg	0.5	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1
Total BTEX	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-
TRH			-	-	-	-	-	-	-	-	-	-	-	-	-	-
C6-C10 Fraction (F1)	mg/kg	10	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25
C6-C10 (F1 minus BTEX)	mg/kg	10	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25
>C10-C16 Fraction (F2)	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	**52**
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	**52**
>C16-C34 Fraction (F3)	mg/kg	100	**300**	**290**	3	**300**	**200**	40	<100	<100	0	<100	<100	0	**120**	**210**
>C34-C40 Fraction (F4)	mg/kg	100	<100	<100	0	<100	**100**	0	<100	<100	0	<100	<100	0	<100	<100
>C10-C40 Fraction (Sum)	mg/kg	50	**300**	**290**	3	**300**	**300**	0	<50	<50	0	<50	<50	0	**120**	**260**
TPH			-	-	-	-	-	-	-	-	-	-	-	-	-	-
C6-C9 Fraction	mg/kg	10	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25
C10-C14 Fraction	mg/kg	50	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	**54**
C15-C28 Fraction	mg/kg	100	**170**	**170**	0	**170**	**120**	34	<100	<100	0	<100	<100	0	<100	**120**
C29-C36 Fraction	mg/kg	100	**180**	**160**	12	**180**	**130**	32	<100	<100	0	<100	<100	0	<100	**130**
C10-C36 Fraction (Sum)	mg/kg	50	**340**	**330**	3	**340**	**250**	31	<50	<50	0	<50	<50	0	<50	**300**
PAH			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	0.2	**0.4**	**0.8**	67	**0.4**	-	-	**0.2**	<0.2	0	**0.2**	-	-	<0.2	**0.2**
Acenaphthene	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
Acenaphthylene	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
Anthracene	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
Benz(a)anthracene	mg/kg	0.1	<0.1	**0.2**	67	<0.1	<0.5	0	**0.1**	<0.1	0	**0.1**	<0.5	0	**0.1**	<0.1
Benzo(a) pyrene	mg/kg	0.05	**0.09**	**0.2**	76	**0.09**	<0.5	0	**0.09**	<0.05	57	**0.09**	<0.5	0	**0.2**	**0.2**
Benzo(b+j)fluoranthene	mg/kg	0.5	-	-	-	-	<0.5	-	-	-	-	-	<0.5	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	**0.1**	0	<0.1	<0.5	0	**0.1**	<0.1	0	**0.1**	<0.5	0	**0.2**	**0.1**
Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	<0.5	-	-	-	-	-	<0.5	-	-	-
Chrysene	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**
Dibenz(a,h)anthracene	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
Fluoranthene	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**
Fluorene	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
Indeno(1,2,3-c,d)pyrene	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
Naphthalene	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
Phenanthrene	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
Pyrene	mg/kg	0.1	<0.1	**0.1**	0	<0.1	<0.5	0	<0.1	<0.1	0	<0.1	<0.5	0	**0.2**	**0.1**
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	<0.5	<0.5	0	<0.5	**0.6**	18	<0.5	<0.5	0	<0.5	**0.6**	18	<0.5	<0.5
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	<0.5	<0.5	0	<0.5	**1.2**	82	<0.5	<0.5	0	<0.5	**1.2**	82	<0.5	<0.5
PAHs (Sum of total)	mg/kg	0.5	-	-	-	-	<0.5	-	-	-	-	-	<0.5	-	-	-
PAHs (Sum of positives)	mg/kg	0.05	**0.5**	**1.6**	105	**0.5**	-	-	**0.68**	<0.05	173	**0.68**	-	-	**0.92**	**0.86**
Metals			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	4	**5**	**6**	18	**5**	<5	0	**10**	**4**	86	**10**	**7**	35	**7**	**7**
Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<1	0	<0.4	<0.4	0	<0.4	<1	0	<0.4	<0.4
Chromium (III+VI)	mg/kg	1	**13**	**18**	32	**13**	**10**	26	**25**	**24**	4	**25**	**24**	4	**15**	**16**
Copper	mg/kg	1	**26**	**25**	4	**26**	**23**	12	**51**	**28**	58	**51**	**24**	72	**43**	**38**
Lead	mg/kg	1	**25**	**27**	8	**25**	**20**	22	**160**	**25**	146	**160**	**24**	148	**31**	**32**
Mercury	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
Nickel	mg/kg	1	**15**	**13**	14	**15**	**12**	22	**12**	**5**	82	**12**	**8**	40	**10**	**10**
Zinc	mg/kg	1	**100**	**110**	10	**100**	**160**	46	**92**	**12**	154	**92**	**18**	135	**110**	**120**
SVOCs			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenamiphos	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-

Table 6
Soil RPDs

	Field ID		BH07	DUP01	RPD	BH07	TRIP01	RPD	BH27	DUP02	RPD	BH27	TRIP02	RPD	BH42	DUP03
	Date		05 Dec 2022	05 Dec 2022		05 Dec 2022	05 Dec 2022		06 Dec 2022	06 Dec 2022		06 Dec 2022	06 Dec 2022		06 Dec 2022	06 Dec 2022
	Matrix Type		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil
	Lab Report Number		312405	312405		312405	ES2244462		312491	312491		312491	ES2244460		312491	312491
	Unit	EQL														
Organochlorine Pesticides			-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
a-BHC	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Aldrin	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Dieldrin	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Aldrin + Dieldrin	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
b-BHC	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Chlordane	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Chlordane (cis)	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Chlordane (trans)	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
d-BHC	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
DDD	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
DDT	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
DDT+DDE+DDD	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endosulfan	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Endosulfan I	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endosulfan II	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endrin	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endrin aldehyde	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Endrin ketone	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
g-BHC (Lindane)	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Heptachlor	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Hexachlorobenzene	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Methoxychlor	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
Organophosphorous Pesticides			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinophos methyl	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Bromophos-ethyl	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Carbophenothion	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Chlorfenvinphos	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Chlorpyrifos	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Diazinon	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Dichlorvos	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Dimethoate	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Ethion	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Fenitrothion	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Fenthion	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Malathion	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1
Methyl parathion	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-
Monocrotophos	mg/kg	0.2	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-
Parathion	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
Prothiofos	mg/kg	0.05	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-
Ronnel	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
PCBs			-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1016	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1221	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1232	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1242	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1248	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1254	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
Arochlor 1260	mg/kg	0.1	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1
PCBs (Sum of total)	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

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 100 (0 - 5 x EQL); 75 (5 - 10 x EQL); 30 (> 10 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

Table 6
Soil RPDs

Field ID			RPD	BH42	TRIP03	RPD	BH36	DUP04	RPD	BH36	TRIP04	RPD	BH23	DUP05	RPD	BH23	TRIP05	RPD
Date				06 Dec 2022	06 Dec 2022		07 Dec 2022	07 Dec 2022		07 Dec 2022	07 Dec 2022		16 Dec 2022	16 Dec 2022		16 Dec 2022	16 Dec 2022	
Matrix Type				Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
Lab Report Number				312491	ES2244460		312652	312652		312652	ES2244672		313427	313427		313427	ES2245999	
	Unit	EQL																
BTEX			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene (BTEX)	mg/kg	1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0	<1	<1	0
Benzene	mg/kg	0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Toluene	mg/kg	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Ethylbenzene	mg/kg	0.5	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0
Xylene (m & p)	mg/kg	0.5	0	<2	<0.5	0	<2	<2	0	<2	<0.5	0	<2	<2	0	<2	<0.5	0
Xylene (o)	mg/kg	0.5	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0
Xylene Total	mg/kg	0.5	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0	<1	<1	0	<1	<0.5	0
Total BTEX	mg/kg	0.2	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
TRH			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C6-C10 Fraction (F1)	mg/kg	10	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0
C6-C10 (F1 minus BTEX)	mg/kg	10	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0
>C10-C16 Fraction (F2)	mg/kg	50	4	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
>C10-C16 Fraction (F2 minus Naphthalene)	mg/kg	50	4	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
>C16-C34 Fraction (F3)	mg/kg	100	55	**120**	<100	18	**110**	<100	10	**110**	<100	10	<100	<100	0	<100	**260**	89
>C34-C40 Fraction (F4)	mg/kg	100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	**210**	71
>C10-C40 Fraction (Sum)	mg/kg	50	74	**120**	<50	82	**110**	<50	75	**110**	<50	75	<50	<50	0	<50	**470**	162
TPH			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C6-C9 Fraction	mg/kg	10	0	<25	<10	0	<25	<25	0	<25	<10	0	<25	<25	0	<25	<10	0
C10-C14 Fraction	mg/kg	50	8	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0
C15-C28 Fraction	mg/kg	100	18	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	**110**	10
C29-C36 Fraction	mg/kg	100	26	<100	<100	0	<100	<100	0	<100	<100	0	<100	<100	0	<100	**240**	82
C10-C36 Fraction (Sum)	mg/kg	50	143	<50	<50	0	<50	<50	0	<50	<50	0	<50	<50	0	<50	**350**	150
PAH			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j+k)fluoranthene	mg/kg	0.2	0	<0.2	-	-	**1**	**0.2**	133	**1**	-	-	**0.7**	<0.2	111	**0.7**	-	-
Acenaphthene	mg/kg	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
Acenaphthylene	mg/kg	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
Anthracene	mg/kg	0.1	0	<0.1	<0.5	0	**0.2**	<0.1	67	**0.2**	<0.5	0	**0.1**	<0.1	0	**0.1**	<0.5	0
Benz(a)anthracene	mg/kg	0.1	0	**0.1**	<0.5	0	**0.6**	**0.2**	100	**0.6**	<0.5	18	**0.5**	**0.1**	133	**0.5**	**1.3**	89
Benzo(a) pyrene	mg/kg	0.05	0	**0.2**	<0.5	0	**0.53**	**0.2**	90	**0.53**	**0.5**	6	**0.4**	**0.09**	127	**0.4**	**1.3**	106
Benzo(b+j)fluoranthene	mg/kg	0.5	-	-	<0.5	-	-	-	-	-	<0.5	-	-	-	-	-	**1.4**	-
Benzo(g,h,i)perylene	mg/kg	0.1	67	**0.2**	<0.5	0	**0.4**	**0.1**	120	**0.4**	<0.5	0	**0.2**	<0.1	67	**0.2**	**0.7**	111
Benzo(k)fluoranthene	mg/kg	0.5	-	-	<0.5	-	-	-	-	-	<0.5	-	-	-	-	-	**0.5**	-
Chrysene	mg/kg	0.1	0	**0.1**	<0.5	0	**0.7**	**0.2**	111	**0.7**	<0.5	33	**0.5**	**0.1**	133	**0.5**	**1.2**	82
Dibenz(a,h)anthracene	mg/kg	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
Fluoranthene	mg/kg	0.1	0	**0.1**	<0.5	0	**1.0**	**0.2**	133	**1.0**	**1.0**	0	**0.7**	**0.2**	111	**0.7**	**2.1**	100
Fluorene	mg/kg	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
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0	**0.1**	<0.5	0	**0.3**	**0.1**	100	**0.3**	<0.5	0	**0.2**	<0.1	67	**0.2**	**0.6**	100
Naphthalene	mg/kg	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
Phenanthrene	mg/kg	0.1	0	<0.1	<0.5	0	**0.4**	<0.1	120	**0.4**	**0.6**	40	**0.3**	<0.1	100	**0.3**	**0.8**	91
Pyrene	mg/kg	0.1	67	**0.2**	<0.5	0	**0.8**	**0.2**	120	**0.8**	**1.0**	22	**1**	**0.2**	133	**1**	**3.2**	105
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5	0	<0.5	**0.6**	18	**0.8**	<0.5	46	**0.8**	**0.8**	0	**0.6**	<0.5	18	**0.6**	**1.9**	104
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5	0	<0.5	**1.2**	82	**0.8**	<0.5	46	**0.8**	**1.2**	40	**0.7**	<0.5	33	**0.7**	**2.2**	103
PAHs (Sum of total)	mg/kg	0.5	-	-	<0.5	-	-	-	-	-	**3.1**	-	-	-	-	-	**13.1**	-
PAHs (Sum of positives)	mg/kg	0.05	7	**0.92**	-	-	**5.9**	**1.5**	119	**5.9**	-	-	**4.6**	**0.68**	148	**4.6**	-	-
Metals			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	mg/kg	4	0	**7**	**5**	33	<4	<4	0	<4	<5	0	<4	<4	0	<4	<5	0
Cadmium	mg/kg	0.4	0	<0.4	<1	0	<0.4	<0.4	0	<0.4	<1	0	<0.4	<0.4	0	<0.4	<1	0
Chromium (III+VI)	mg/kg	1	6	**15**	**8**	61	**13**	**11**	17	**13**	**7**	60	**20**	**6**	108	**20**	**13**	42
Copper	mg/kg	1	12	**43**	**23**	61	**24**	**17**	34	**24**	**10**	82	**22**	**15**	38	**22**	**25**	13
Lead	mg/kg	1	3	**31**	**19**	48	**53**	**30**	55	**53**	**31**	52	**20**	**10**	67	**20**	**43**	73
Mercury	mg/kg	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
Nickel	mg/kg	1	0	**10**	**7**	35	**7**	**4**	55	**7**	**2**	111	**16**	**4**	120	**16**	**9**	56
Zinc	mg/kg	1	9	**110**	**102**	8	**54**	**39**	32	**54**	**47**	14	**28**	**16**	55	**28**	**48**	53
SVOCs			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenamiphos	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-

Table 6
Soil RPDs

Field ID			BH42	TRIP03	RPD	BH36	DUP04	RPD	BH36	TRIP04	RPD	BH23	DUP05	RPD	BH23	TRIP05	RPD
Date			06 Dec 2022	06 Dec 2022		07 Dec 2022	07 Dec 2022		07 Dec 2022	07 Dec 2022		16 Dec 2022	16 Dec 2022		16 Dec 2022	16 Dec 2022	
Matrix Type			Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
Lab Report Number			312491	ES2244460		312652	312652		312652	ES2244672		313427	313427		313427	ES2245999	
	Unit	EQL															
Organochlorine Pesticides			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
a-BHC	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Aldrin	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Dieldrin	mg/kg	0.05	0	<0.1	**0.09**	0	**0.3**	**0.1**	100	**0.3**	<0.05	143	**0.2**	**0.4**	67	**0.2**	**0.19**	5
Aldrin + Dieldrin	mg/kg	0.05	-	-	**0.09**	-	-	-	-	-	<0.05	-	-	-	-	-	**0.19**	-
b-BHC	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Chlordane	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Chlordane (cis)	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Chlordane (trans)	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
d-BHC	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
DDD	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
DDT	mg/kg	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
DDT+DDE+DDD	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endosulfan	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Endosulfan I	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endosulfan II	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endosulfan sulphate	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endrin	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endrin aldehyde	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Endrin ketone	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
g-BHC (Lindane)	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Heptachlor	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Heptachlor epoxide	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Hexachlorobenzene	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Methoxychlor	mg/kg	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
Organophosphorous Pesticides			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinophos methyl	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Bromophos-ethyl	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Carbophenothion	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Chlorfenvinphos	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Chlorpyrifos	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Chlorpyrifos-methyl	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Diazinon	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Dichlorvos	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Dimethoate	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Ethion	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Fenitrothion	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Fenthion	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Malathion	mg/kg	0.05	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Methyl parathion	mg/kg	0.2	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Monocrotophos	mg/kg	0.2	-	-	<0.2	-	-	-	-	-	<0.2	-	-	-	-	-	<0.2	-
Parathion	mg/kg	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
Prothiofos	mg/kg	0.05	-	-	<0.05	-	-	-	-	-	<0.05	-	-	-	-	-	<0.05	-
Ronnel	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
PCBs			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1016	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1221	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1232	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1242	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1248	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1254	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
Arochlor 1260	mg/kg	0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-	<0.1	<0.1	0	<0.1	-	-
PCBs (Sum of total)	mg/kg	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

**RPDs have only been considered where a concentration is greater than 1 times the
**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for e
***Interlab Duplicates are matched on a per compound basis as methods vary betwe

Table 7
Groundwater RPDs

			Lab Report Number	313723	313723		313723	ES2246531	
			Field ID	MW05	DUP1		MW05	TRIP1	
			Date	20 Dec 2022	20 Dec 2022		20 Dec 2022	20 Dec 2022	
			Matrix Type	Water	Water	RPD	Water	Water	RPD
	Unit	EQL							
BTEX									
Naphthalene (BTEX)	ug/L	1	<1	<1	0	<1	<5	0
Benzene	ug/L	1	<1	<1	0	<1	<1	0
Toluene	ug/L	1	<1	<1	0	<1	<2	0
Ethylbenzene	ug/L	1	<1	<1	0	<1	<2	0
Xylene (m & p)	ug/L	2	<2	<2	0	<2	<2	0
Xylene (o)	ug/L	1	<1	<1	0	<1	<2	0
Xylene Total	ug/L	2					<2	
Total BTEX	ug/L	1					<1	
TRH									
C6-C10 Fraction (F1)	ug/L	10	<10	<10	0	<10	<20	0
C6-C10 (F1 minus BTEX)	ug/L	10	<10	<10	0	<10	<20	0
>C10-C16 Fraction (F2)	ug/L	50	<50	<50	0	<50	<100	0
>C10-C16 Fraction (F2 minus Naphthalene)	ug/L	50	<50	<50	0	<50	<100	0
>C16-C34 Fraction (F3)	ug/L	100	<100	<100	0	<100	<100	0
>C34-C40 Fraction (F4)	ug/L	100	<100	<100	0	<100	<100	0
>C10-C40 Fraction (Sum)	ug/L	50	<50	<50	0	<50	<100	0
TPH									
C6-C9 Fraction	ug/L	10	<10	<10	0	<10	<20	0
C10-C14 Fraction	ug/L	50	<50	<50	0	<50	<50	0
C15-C28 Fraction	ug/L	100	<100	<100	0	<100	<100	0
C29-C36 Fraction	ug/L	50	<100	<100	0	<100	<50	0
C10-C36 Fraction (Sum)	ug/L	50	<50	<50	0	<50	<50	0
PAH									
Benzo(b+j+k)fluoranthene	ug/L	2	<2	<2	0	<2		
Acenaphthene	ug/L	1	<1	<1	0	<1	<1.0	0
Acenaphthylene	ug/L	1	<1	<1	0	<1	<1.0	0
Anthracene	ug/L	1	<1	<1	0	<1	<1.0	0
Benz(a)anthracene	ug/L	1	<1	<1	0	<1	<1.0	0
Benzo(a) pyrene	ug/L	0.5	<1	<1	0	<1	<0.5	0
Benzo(b+j)fluoranthene	ug/L	1					<1.0	
Benzo(g,h,i)perylene	ug/L	1	<1	<1	0	<1	<1.0	0
Benzo(k)fluoranthene	ug/L	1					<1.0	
Chrysene	ug/L	1	<1	<1	0	<1	<1.0	0
Dibenz(a,h)anthracene	ug/L	1	<1	<1	0	<1	<1.0	0
Fluoranthene	ug/L	1	<1	<1	0	<1	<1.0	0
Fluorene	ug/L	1	<1	<1	0	<1	<1.0	0
Indeno(1,2,3-c,d)pyrene	ug/L	1	<1	<1	0	<1	<1.0	0
Naphthalene	ug/L	1	<1	<1	0	<1	<1.0	0
Phenanthrene	ug/L	1	<1	<1	0	<1	<1.0	0
Pyrene	ug/L	1	<1	<1	0	<1	<1.0	0
Benzo(a)pyrene TEQ	ug/L	5	<5	<5	0	<5		
PAHs (Sum of total)	ug/L	0.5					<0.5	
PAHs (Sum of positives)	ug/L	1	**0**	**0**		**0**		
Metals									
Arsenic (filtered)	ug/L	1	<1	**2**	67	<1	<1	0
Cadmium (filtered)	ug/L	0.1	<0.1	<0.1	0	<0.1	<0.1	0
Chromium (III+VI) (filtered)	ug/L	1	<1	<1	0	<1	<1	0
Copper (filtered)	ug/L	1	<1	<1	0	<1	<1	0
Lead (filtered)	ug/L	1	<1	<1	0	<1	<1	0
Mercury (filtered)	ug/L	0.05	<0.05	<0.05	0	<0.05	<0.1	0
Nickel (filtered)	ug/L	1	**6**	**7**	15	**6**	**5**	18
Zinc (filtered)	ug/L	1	<1	**18**	179	<1	<5	0

***RPDs have only been considered where a concentration is greater than 1 times the EQL.**
****Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 100 (0 - 5 x EQL); 75 (5 - 10 x EQL); 30 (> 10 x EQL))**
*****Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory**

Table 8
Trip Blank/Trip Spike

				BTEX							TRH	TPH
				Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 Fraction (F1)	C6-C9 Fraction
EQL (Soil) - mg/kg				1	0.2	0.5	0.5	0.5	0.5	0.5	10	10
EQL (Water) - ug/L				1	1	1	1	2	1	-	10	10
Sample	**Lab Report Number**	**Date**	**Matrix Type**									
941653	**312405**	**05 Dec 2022**	**Soil (mg/kg)**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<25
945779	**313723**	**20 Dec 2022**	**Water (ug/L)**	<1	<1	<1	<1	<2	<1	-	<10	<10

				BTEX							TRH	TPH
				Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C10 Fraction (F1)	C6-C9 Fraction
Sample	**Lab Report Number**	**Date**	**Matrix Type**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**	**%**
Trip Spike	**313723**	**20 Dec 2022**	**Water**	-	117	118	120	120	119	-	-	-

Table 9 - Waste Classification (Total)

	ASB	BTEX							TPH				
	Asbestos fibres	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
	Detect	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		1	0.2	0.5	1	2	1	1	25	50	100	100	50
NSW 2014 General Solid Waste CT1 (No Leaching)			10	288	600			1,000	650				10,000
NSW 2014 General Solid Waste SCC1 (with leached)			18	518	1,080			1,800	650				10,000
NSW 2014 Restricted Solid Waste CT2 (No Leaching)			40	1,152	2,400			4,000	2,600				40,000
NSW 2014 Restricted Solid Waste SCC2 (with leached)			72	2,073	4,320			7,200	2,600				40,000
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**										
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	**100**	**100**
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**170**	**180**	**340**
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**130**	**130**	**260**
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	**110**	**110**
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	**140**	**140**
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**970**	**1,100**	**2,100**
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**260**	**820**	**1,100**
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**140**	**190**	**340**
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**110**	**140**	**240**
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	**0**	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50

Table 9 - Waste Classification (Total)

					ASB	BTEX							TPH				
					Asbestos fibres	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
					Detect	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH21	2.8	Natural	16 Dec 2022	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH22	0.5	Fill	16 Dec 2022	313427	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH22	1	Natural	16 Dec 2022	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH23	0.1	Fill	16 Dec 2022	313427	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**180**	<100	**180**
BH24	0.5	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH25	0.15	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH25	0.5	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH26	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**110**	<100	**110**
BH26	0.5	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH27	0.1	Natural	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH27	0.5	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH28	1	Natural	08 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH29	0.4	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH30	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	**110**	**110**
BH30	1	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH31	3	Natural	08 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH33	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH33	0.5	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH34	0.1	Fill	05 Dec 2022	312405	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**130**	<100	**130**
BH34	0.5	Fill	05 Dec 2022	312405	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH35	0.5	Natural	07 Dec 2022	312652	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH35	0.7	Natural	07 Dec 2022	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH36	0.25	Fill	07 Dec 2022	312652	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH36	0.4	Natural	07 Dec 2022	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH37	0.35	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH38	0.15	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	**140**	**7,700**	**5,300**	**13,000**
BH38	0.4	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**450**	**260**	**710**
BH39	0.3	Natural	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH40	0.25	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	**120**	**4,100**	**2,200**	**6,400**
BH40	0.5	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	**260**	**190**	**450**
BH41	0.25	Fill	09 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH41	0.4	Natural	09 Dec 2022	312813	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH42	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH43	0.1	Fill	06 Dec 2022	312491	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH43	0.3	Natural	06 Dec 2022	312491	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH44	0.25	Fill	07 Dec 2022	312652	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH45	0.2	Fill	07 Dec 2022	312652	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	**140**	**8,400**	**4,900**	**13,000**
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	<0.2	<0.5	<1	<2	<1	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH46	1	Fill	16 Dec 2022	313427	-	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
BH47	1	Fill	16 Dec 2022	313427	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50
SS1		Fill	08 Dec 2022	312813	0	<1	<0.2	<0.5	<1	<2	<1	<1	<25	<50	<100	<100	<50

Table 9 - Waste Classification (Total)

					PAH															
					Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.2	0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5	0.05
NSW 2014 General Solid Waste CT1 (No Leaching)										0.8												
NSW 2014 General Solid Waste SCC1 (with leached)										10												
NSW 2014 Restricted Solid Waste CT2 (No Leaching)										3.2												
NSW 2014 Restricted Solid Waste SCC2 (with leached)										23												
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**																		
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.2	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	**0.1**
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	**2.7**	<0.1	**0.2**	**0.5**	**1.8**	**2.6**	**0.8**	**1.4**	**0.1**	**2.6**	<0.1	**1.1**	<0.1	**1.6**	**2.6**	**3.3**	**3.3**	**18**
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0.6**	<0.1	<0.1	<0.1	**0.2**	**0.2**	**0.1**	**0.1**	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.5	<0.5	**1.5**
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**0.4**	<0.1	<0.1	<0.1	<0.1	**0.09**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	**0.5**
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	**8.9**	<0.1	**0.4**	**0.4**	**3.3**	**2.9**	**1.7**	**2.0**	**0.3**	**3.6**	<0.1	**1.7**	<0.1	**1.2**	**4.6**	**4.6**	**4.6**	**31**
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	**0.1**	**0.07**	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.5	<0.5	**0.52**
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	**0.7**	<0.1	<0.1	<0.1	**0.3**	**0.82**	**0.2**	**0.3**	<0.1	**0.3**	<0.1	**0.6**	<0.1	<0.1	**0.5**	**1.0**	**1.1**	**3.7**
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	**0.1**	**0.08**	<0.1	**0.1**	<0.1	**0.2**	<0.1	<0.1	<0.1	**0.2**	**0.2**	<0.5	<0.5	**1.0**
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**1**	**0.3**	<0.1	**0.4**	**1.1**	**0.60**	**0.5**	**0.7**	<0.1	**1.7**	<0.1	**0.2**	<0.1	**1.6**	**1.6**	**0.9**	**1**	**10**
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	**0.2**	**0.2**	<0.5	<0.5	**0.82**
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	**0.4**	<0.1	<0.1	<0.1	**0.4**	**0.3**	**0.5**	**0.4**	<0.1	**0.3**	<0.1	**0.2**	<0.1	**0.3**	**0.5**	<0.5	<0.5	**3.1**
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.5	<0.5	**0.1**
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	**2**	<0.1	<0.1	**0.2**	**1**	**0.97**	**0.6**	**1.1**	**0.1**	**1.7**	<0.1	**0.5**	<0.1	**0.6**	**2.2**	**1.4**	**1.4**	**10**
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	**0.3**	<0.1	<0.1	<0.1	**0.2**	**0.1**	<0.1	**0.2**	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	**0.3**	<0.5	<0.5	**1.3**
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	<0.2	<0.1	<0.1	<0.1	<0.2	**0.06**	<0.1	<0.2	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.5	<0.5	**0.4**
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	**0.6**	<0.1	<0.1	**0.1**	**0.4**	**0.4**	**0.2**	**0.4**	<0.1	**0.9**	<0.1	**0.2**	<0.1	**0.6**	**0.9**	**0.5**	**0.6**	**4.8**

Table 9 - Waste Classification (Total)

					PAH																	
					Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	PAHs (Sum of positives)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	0.7	<0.1	<0.1	0.2	0.4	0.4	0.2	0.5	<0.1	1	<0.1	0.2	<0.1	0.6	0.9	0.6	0.7	5.1
BH21	2.8	Natural	16 Dec 2022	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH22	0.5	Fill	16 Dec 2022	313427	0.4	<0.1	<0.1	0.1	0.3	0.2	0.1	0.3	<0.1	0.5	<0.1	0.1	<0.1	0.3	0.6	<0.5	<0.5	2.9
BH22	1	Natural	16 Dec 2022	313427	0.5	<0.1	<0.1	0.1	0.4	0.4	0.2	0.4	<0.1	0.6	<0.1	0.2	<0.1	0.3	1.2	0.5	0.6	4.3
BH23	0.1	Fill	16 Dec 2022	313427	0.7	<0.1	<0.1	0.1	0.5	0.4	0.2	0.5	<0.1	0.7	<0.1	0.2	<0.1	0.3	1	0.6	0.7	4.6
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.1	<0.1	0.2	<0.1	0.2	<0.1	<0.1	<0.1	0.2	0.2	<0.5	<0.5	1.0
BH24	0.5	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH25	0.15	Fill	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH25	0.5	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH26	0.1	Fill	06 Dec 2022	312491	0.9	0.2	<0.1	0.6	0.8	0.70	0.4	1.4	0.1	1.6	0.2	0.3	<0.1	2.3	1.8	1.0	1.0	11
BH26	0.5	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH27	0.1	Natural	06 Dec 2022	312491	0.2	<0.1	<0.1	<0.1	0.1	0.09	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.68
BH27	0.5	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.1
BH28	1	Natural	08 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	0.2	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.74
BH29	0.4	Natural	09 Dec 2022	312813	0.9	<0.1	<0.1	<0.1	0.6	0.92	0.2	0.4	<0.1	0.4	<0.1	0.3	<0.1	0.1	0.5	1.1	1.2	4.2
BH30	0.1	Fill	06 Dec 2022	312491	2.6	<0.1	<0.1	0.2	0.9	1.8	0.6	1.5	<0.1	1.2	<0.1	0.3	<0.1	1.1	1.8	2.3	2.4	12
BH30	1	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	0.9	<0.1	<0.1	0.2	0.8	0.52	0.3	0.5	<0.1	1.0	<0.1	0.3	<0.1	0.5	1.2	0.8	0.8	6.3
BH31	0.5	Fill	08 Dec 2022	312813	0.3	<0.1	<0.1	<0.1	0.1	0.2	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	1.0
BH31	3	Natural	08 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	0.2	<0.1	<0.1	<0.1	0.2	0.2	<0.1	0.1	<0.1	0.2	<0.1	<0.1	<0.1	0.1	0.2	<0.5	<0.5	1.1
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	0.3	<0.1	<0.1	<0.1	0.1	0.2	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	1.0
BH33	0.1	Fill	06 Dec 2022	312491	0.4	<0.1	<0.1	<0.1	0.2	0.3	0.2	0.2	<0.1	0.1	<0.1	0.2	<0.1	<0.1	0.2	<0.5	<0.5	1.7
BH33	0.5	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	0.3	0.2	0.2	0.3	<0.1	0.2	<0.1	0.2	<0.1	<0.1	0.3	<0.5	<0.5	1.6
BH34	0.1	Fill	05 Dec 2022	312405	0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.2
BH34	0.5	Fill	05 Dec 2022	312405	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH35	0.5	Natural	07 Dec 2022	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH35	0.7	Natural	07 Dec 2022	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH36	0.25	Fill	07 Dec 2022	312652	1	<0.1	<0.1	0.2	0.6	0.53	0.4	0.7	<0.1	1.0	<0.1	0.3	<0.1	0.4	0.8	0.8	0.8	5.9
BH36	0.4	Natural	07 Dec 2022	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	1	<0.1	<0.1	<0.1	0.5	0.59	0.5	0.5	0.1	0.7	<0.1	0.4	<0.1	0.2	0.7	0.9	0.9	5.1
BH37	0.2	Fill	09 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH37	0.35	Natural	09 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH38	0.15	Fill	09 Dec 2022	312813	310	8.0	3.4	50	210	250	61	130	22	300	4.8	100	<1	190	300	340	340	1,900
BH38	0.4	Natural	09 Dec 2022	312813	14	0.4	0.2	3.2	9.8	7.8	4.4	9.7	1.0	23	0.2	3.5	<0.1	16	22	12	12	120
BH39	0.3	Natural	09 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	0.07	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	0.07
BH40	0.25	Fill	09 Dec 2022	312813	160	4.3	2.2	60	130	140	25	86	9.3	220	1.3	48	<1	200	190	180	180	1,300
BH40	0.5	Natural	09 Dec 2022	312813	9.8	0.2	0.2	4.3	7.1	5.5	3.2	7.4	0.5	18	<0.1	2.5	<0.1	14	16	8.1	8.1	89
BH41	0.25	Fill	09 Dec 2022	312813	0.2	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.78
BH41	0.4	Natural	09 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH42	0.1	Fill	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	0.1	0.2	0.2	0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.92
BH43	0.1	Fill	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	0.2	0.1	<0.1	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.79
BH43	0.3	Natural	06 Dec 2022	312491	<0.2	<0.1	<0.1	<0.1	0.2	0.09	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.5	<0.5	0.50
BH44	0.25	Fill	07 Dec 2022	312652	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.5	<0.5	0.54
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH45	0.2	Fill	07 Dec 2022	312652	130	7.2	3.2	38	96	79	38	100	8.9	240	2.6	32	1.3	90	210	120	120	1,100
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	2	<0.1	<0.1	0.5	1.4	0.98	0.6	1.5	0.1	3.6	<0.1	0.4	<0.1	1.1	3.1	1.5	1.5	15
BH46	1	Fill	16 Dec 2022	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
BH47	1	Fill	16 Dec 2022	313427	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05
SS1		Fill	08 Dec 2022	312813	<0.2	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.05

Table 9 - Waste Classification (Total)

	Metals								
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	4	0.4	1	1	10	1	0.1	1	1
NSW 2014 General Solid Waste CT1 (No Leaching)	100	20				100	4	40	
NSW 2014 General Solid Waste SCC1 (with leached)	500	100				1,500	50	1,050	
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	400	80				400	16	160	
NSW 2014 Restricted Solid Waste SCC2 (with leached)	2,000	400				6,000	200	4,200	

Field ID	Depth	Matrix Description	Date	Lab Report									
BH01	0.1	Fill	08 Dec 2022	312813	5	<0.4	15	33	-	24	<0.1	17	35
BH01	1.1	Natural	08 Dec 2022	312813	6	<0.4	25	19	57,000	19	<0.1	8	39
BH02	0.1	Fill	08 Dec 2022	312813	<4	<0.4	8	34	-	55	<0.1	8	59
BH02	1	Natural	08 Dec 2022	312813	7	<0.4	22	19	-	23	<0.1	7	14
BH02	2	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH02	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH03	0.15	Fill	05 Dec 2022	312405	5	<0.4	20	28	-	25	<0.1	3	10
BH03	0.5	Natural	05 Dec 2022	312405	<4	<0.4	15	21	-	25	<0.1	2	6
BH04	0.15	Natural	05 Dec 2022	312405	<4	<0.4	13	21	-	51	<0.1	1	6
BH04	0.5	Natural	05 Dec 2022	312405	<4	<0.4	3	10	-	15	<0.1	<1	4
BH04	1	Natural	05 Dec 2022	312405	-	-	-	-	28,000	-	-	-	-
BH05	0.1	Fill	05 Dec 2022	312405	<4	<0.4	11	30	-	12	<0.1	43	50
BH05	1	Natural	05 Dec 2022	312405	<4	<0.4	12	13	-	18	<0.1	1	4
BH05	3	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-
BH05	4	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-
BH06	0.1	Fill	05 Dec 2022	312405	7	<0.4	13	28	-	90	<0.1	8	29
BH06	0.5	Natural	05 Dec 2022	312405	6	<0.4	20	26	-	25	<0.1	3	9
BH06 - [TRIPLICATE]	0.5	Natural	05 Dec 2022	312405	<4	<0.4	14	16	-	17	<0.1	2	7
BH07	0.1	Fill	05 Dec 2022	312405	5	<0.4	13	26	-	25	<0.1	15	100
BH07	1	Fill	05 Dec 2022	312405-A	-	-	-	-	-	-	-	-	-
BH07	3	Fill	05 Dec 2022	312405	<4	<0.4	5	21	-	16	<0.1	2	13
BH08	0.1	Fill	05 Dec 2022	312405	<4	<0.4	8	23	-	36	<0.1	9	39
BH08	0.5	Natural	05 Dec 2022	312405	5	<0.4	12	29	-	16	<0.1	2	14
BH09	0.1	Fill	06 Dec 2022	312491	<4	<0.4	11	25	-	19	<0.1	6	34
BH09	0.5	Fill	06 Dec 2022	312491-A	-	-	-	-	-	-	-	-	-
BH09	2	Natural	06 Dec 2022	312491	5	<0.4	3	25	-	13	<0.1	2	18
BH09	4	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-
BH09	5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	<4	<0.4	13	14	-	19	<0.1	7	27
BH11	0.1	Fill	09 Dec 2022	312813	<4	<0.4	16	54	-	17	<0.1	11	43
BH11 - [TRIPLICATE]	0.1	Fill	09 Dec 2022	312813	<4	<0.4	8	24	-	10	<0.1	6	26
BH12	0.1	Fill	07 Dec 2022	312652	<4	<0.4	10	8	-	15	<0.1	7	26
BH12	0.5	Fill	07 Dec 2022	312652	<4	<0.4	11	8	-	9	<0.1	9	22
BH12	2	Natural	07 Dec 2022	312652	6	<0.4	9	50	34,000	18	<0.1	13	53
BH12	4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-
BH12	5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-
BH13	0.1	Fill	06 Dec 2022	312491	<4	<0.4	14	33	-	17	<0.1	11	30
BH13	2.7	Natural	06 Dec 2022	312491	<4	<0.4	9	77	-	28	<0.1	33	160
BH14	0.1	Fill	06 Dec 2022	312491	<4	<0.4	17	51	-	32	<0.1	7	46
BH14	0.5	Natural	06 Dec 2022	312491	35	<0.4	8	93	-	43	<0.1	76	360
BH15	0.1	Natural	07 Dec 2022	312652	<4	<0.4	7	56	-	17	<0.1	10	33
BH15	0.5	Natural	07 Dec 2022	312652	<4	<0.4	8	60	-	35	<0.1	12	43
BH15	3	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-
BH15	3	Natural	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-
BH15	4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-
BH16	0.1	Fill	06 Dec 2022	312491	<4	<0.4	11	58	-	21	<0.1	11	35
BH16	0.5	Natural	06 Dec 2022	312491	<4	<0.4	5	63	-	45	<0.1	38	150
BH17	0.1	Fill	06 Dec 2022	312491	<4	<0.4	16	50	-	34	<0.1	12	35
BH17	0.5	Natural	06 Dec 2022	312491	<4	<0.4	3	88	-	21	0.4	3	240
BH17	2	Natural	06 Dec 2022	312491	-	-	-	-	27,000	-	-	-	-
BH17 - [TRIPLICATE]	0.5	Natural	06 Dec 2022	312491	<4	<0.4	3	75	-	20	<0.1	3	130
BH18	0.1	Fill	16 Dec 2022	313427	<4	<0.4	11	18	-	19	<0.1	9	28
BH18 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	<4	<0.4	5	10	-	10	<0.1	5	15
BH19	0.1	Natural	16 Dec 2022	313427	<4	<0.4	9	91	-	10	<0.1	10	40
BH19	1	Natural	16 Dec 2022	313427	5	<0.4	8	68	-	25	<0.1	22	90
BH20	0.1	Natural	16 Dec 2022	313427	<4	<0.4	18	27	-	16	<0.1	14	31

Table 9 - Waste Classification (Total)

					Metals								
					Arsenic	Cadmium	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	4	<0.4	28	21	-	7	<0.1	30	23
BH21	2.8	Natural	16 Dec 2022	313427	<4	<0.4	5	50	-	11	<0.1	13	79
BH22	0.5	Fill	16 Dec 2022	313427	<4	<0.4	11	37	-	20	<0.1	9	30
BH22	1	Natural	16 Dec 2022	313427	<4	<0.4	6	46	-	16	<0.1	4	17
BH23	0.1	Fill	16 Dec 2022	313427	<4	<0.4	20	22	-	20	<0.1	16	28
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	6	<0.4	11	20	-	20	<0.1	7	25
BH24	0.1	Fill	06 Dec 2022	312491	<4	<0.4	20	37	-	29	<0.1	22	59
BH24	0.5	Natural	06 Dec 2022	312491	<4	<0.4	7	76	-	18	<0.1	10	57
BH25	0.15	Fill	06 Dec 2022	312491	<4	<0.4	7	35	-	15	<0.1	4	23
BH25	0.5	Natural	06 Dec 2022	312491	<4	<0.4	6	79	-	18	<0.1	10	59
BH26	0.1	Fill	06 Dec 2022	312491	<4	<0.4	16	23	-	13	<0.1	16	32
BH26	0.5	Natural	06 Dec 2022	312491	5	<0.4	5	21	-	12	<0.1	2	17
BH27	0.1	Natural	06 Dec 2022	312491	10	<0.4	25	51	-	160	0.1	12	92
BH27	0.5	Natural	06 Dec 2022	312491	4	<0.4	20	27	-	22	<0.1	3	10
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	32,000	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	8	<0.4	10	23	-	18	<0.1	4	16
BH28	1	Natural	08 Dec 2022	312813	7	<0.4	6	27	-	11	<0.1	5	49
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	<4	<0.4	11	32	-	23	<0.1	13	28
BH29	0.4	Natural	09 Dec 2022	312813	4	<0.4	6	28	-	13	<0.1	5	21
BH30	0.1	Fill	06 Dec 2022	312491	<4	<0.4	12	26	-	36	<0.1	7	41
BH30	1	Natural	06 Dec 2022	312491	7	<0.4	25	26	-	38	<0.1	9	34
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	<4	<0.4	12	13	-	25	<0.1	7	32
BH31	3	Natural	08 Dec 2022	312813	5	<0.4	19	16	-	13	<0.1	3	11
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	<4	<0.4	8	36	-	3	<0.1	67	34
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	4	<0.4	21	18	-	21	<0.1	13	41
BH33	0.1	Fill	06 Dec 2022	312491	<4	<0.4	17	32	-	89	<0.1	9	54
BH33	0.5	Natural	06 Dec 2022	312491	7	<0.4	22	160	-	42	<0.1	9	61
BH34	0.1	Fill	05 Dec 2022	312405	4	<0.4	21	36	-	25	<0.1	33	270
BH34	0.5	Fill	05 Dec 2022	312405	4	<0.4	20	15	-	22	<0.1	8	23
BH35	0.5	Natural	07 Dec 2022	312652	<4	<0.4	7	34	-	24	<0.1	4	23
BH35	0.7	Natural	07 Dec 2022	312652	6	<0.4	19	20	-	25	<0.1	10	27
BH36	0.25	Fill	07 Dec 2022	312652	<4	<0.4	13	24	-	53	<0.1	7	54
BH36	0.4	Natural	07 Dec 2022	312652	4	<0.4	14	32	-	28	<0.1	10	38
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	<4	<0.4	12	26	-	29	<0.1	6	37
BH37	0.2	Fill	09 Dec 2022	312813	<4	<0.4	7	5	-	4	<0.1	7	7
BH37	0.35	Natural	09 Dec 2022	312813	7	<0.4	21	11	-	14	<0.1	4	8
BH38	0.15	Fill	09 Dec 2022	312813	<4	<0.4	3	3	-	3	<0.1	2	10
BH38	0.4	Natural	09 Dec 2022	312813	5	<0.4	13	13	-	13	<0.1	2	5
BH39	0.3	Natural	09 Dec 2022	312813	4	<0.4	13	27	-	20	<0.1	7	24
BH40	0.25	Fill	09 Dec 2022	312813	<4	<0.4	3	42	-	1	<0.1	24	15
BH40	0.5	Natural	09 Dec 2022	312813	4	<0.4	24	14	-	16	<0.1	10	19
BH41	0.25	Fill	09 Dec 2022	312813	<4	<0.4	22	30	-	24	<0.1	24	42
BH41	0.4	Natural	09 Dec 2022	312813	6	<0.4	19	21	-	23	<0.1	8	59
BH42	0.1	Fill	06 Dec 2022	312491	7	<0.4	15	43	-	31	<0.1	10	110
BH43	0.1	Fill	06 Dec 2022	312491	6	<0.4	14	35	-	26	<0.1	16	47
BH43	0.3	Natural	06 Dec 2022	312491	5	<0.4	12	34	-	29	<0.1	9	30
BH44	0.25	Fill	07 Dec 2022	312652	<4	<0.4	8	21	-	31	<0.1	3	42
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	<4	<0.4	12	28	-	22	<0.1	7	18
BH45	0.2	Fill	07 Dec 2022	312652	<4	<0.4	1	290	-	2	<0.1	4	14
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	8	<0.4	23	29	-	30	<0.1	11	44
BH46	1	Fill	16 Dec 2022	313427	<4	<0.4	4	13	-	13	<0.1	2	7
BH47	1	Fill	16 Dec 2022	313427	<4	<0.4	3	3	-	2	<0.1	2	4
SS1		Fill	08 Dec 2022	312813	6	<0.4	18	9	-	15	<0.1	2	8

Table 9 - Waste Classification (Total)

					VOCs																		
					1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NSW 2014 General Solid Waste CT1 (No Leaching)					200	600	26	24		14								86	10					150	
NSW 2014 General Solid Waste SCC1 (with leached)					360	1,080	46.8	43.2		25								155	18					270	
NSW 2014 Restricted Solid Waste CT2 (No Leaching)					800	2,400	104	96		56								344	40					600	
NSW 2014 Restricted Solid Waste SCC2 (with leached)					1,440	4,320	187.2	172.8		100								620	72					1,080	
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**																					
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					VOCs																				
					1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichlorobenzene	1,2,3-trichloropropane	1,2,4-trichlorobenzene	1,2,4-trimethylbenzene	1,2-dibromo-3-chloropropane	1,2-dibromoethane	1,2-dichlorobenzene	1,2-dichloroethane	1,2-dichloropropane	1,3,5-trimethylbenzene	1,3-dichlorobenzene	1,3-dichloropropane	1,4-dichlorobenzene	2,2-dichloropropane
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.4	Natural	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH39	0.3	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH44	0.35	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1		Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					VOCs																			
					2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NSW 2014 General Solid Waste CT1 (No Leaching)												10	2,000			120								
NSW 2014 General Solid Waste SCC1 (with leached)												18	3,600			126								
NSW 2014 Restricted Solid Waste CT2 (No Leaching)												40	8,000			480								
NSW 2014 Restricted Solid Waste SCC2 (with leached)												72	14,400			864								
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**																				
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					VOCs																				
					2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Cyclohexane	Dibromomethane	Dichlorodifluoromethane	Hexachlorobutadiene	Isopropylbenzene	n-butylbenzene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.4	Natural	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH39	0.3	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH44	0.35	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1		Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

REDITUS

					VOCs										
					n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	1	1	1	1	1	1	1	1	1	1
NSW 2014 General Solid Waste CT1 (No Leaching)								60	10		14				4
NSW 2014 General Solid Waste SCC1 (with leached)								108	18		25.2				7.2
NSW 2014 Restricted Solid Waste CT2 (No Leaching)								240	40		56				16
NSW 2014 Restricted Solid Waste SCC2 (with leached)								432	72		100.8				28.8
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**											
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					VOCs											
					n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Styrene	Trichloroethene	tert-butylbenzene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Trichlorofluoromethane	Vinyl chloride
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH24	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH30	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH38	0.4	Natural	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH39	0.3	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH44	0.35	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652-A	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-
BH46	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
BH47	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-
SS1		Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					Organochlorine Pesticides																		
					4,4-DDE	a-BHC	Aldrin	Dieldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NSW 2014 General Solid Waste CT1 (No Leaching)																									
NSW 2014 General Solid Waste SCC1 (with leached)																									
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																									
NSW 2014 Restricted Solid Waste SCC2 (with leached)																									
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**																					
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	**0.4**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	**0.1**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	**0.8**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 9 - Waste Classification (Total)

					Organochlorine Pesticides																			
					4,4-DDE	a-BHC	Aldrin	Dieldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	**0.8**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.15	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	**1.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.1	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30	1	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH33	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.1	Fill	05 Dec 2022	312405	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.5	Fill	05 Dec 2022	312405	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.5	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.7	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.25	Fill	07 Dec 2022	312652	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.4	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH38	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39	0.3	Natural	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH40	0.25	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.3	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	Fill	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH45	0.2	Fill	07 Dec 2022	312652	<1	<1	<1	**2.3**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	**8.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.2**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH46	1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH47	1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SS1		Fill	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 9 - Waste Classification (Total)

				Organophosphorous Pesticides												PCBs							
				Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NSW 2014 General Solid Waste CT1 (No Leaching)						4																	< 50
NSW 2014 General Solid Waste SCC1 (with leached)						7.5																	< 50
NSW 2014 Restricted Solid Waste CT2 (No Leaching)						16																	< 50
NSW 2014 Restricted Solid Waste SCC2 (with leached)						30																	< 50
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**																			
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 9 - Waste Classification (Total)

					Organophosphorous Pesticides												PCBs							
					Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.15	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.1	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30	1	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH32	0.3	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH33	0.5	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.1	Fill	05 Dec 2022	312405	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH34	0.5	Fill	05 Dec 2022	312405	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.5	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH35	0.7	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.25	Fill	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36	0.4	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1
BH38	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH39	0.3	Natural	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH40	0.25	Fill	09 Dec 2022	312813	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.1
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.1	Fill	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH43	0.3	Natural	06 Dec 2022	312491	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	Fill	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH45	0.2	Fill	07 Dec 2022	312652	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH46	1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH47	1	Fill	16 Dec 2022	313427	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
SS1		Fill	08 Dec 2022	312813	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 9 - Waste Classification (Total)

	PFAS														
	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0005	0.0005	0.0001	0.005
NSW 2014 General Solid Waste CT1 (No Leaching)															
NSW 2014 General Solid Waste SCC1 (with leached)											18				
NSW 2014 Restricted Solid Waste CT2 (No Leaching)															
NSW 2014 Restricted Solid Waste SCC2 (with leached)											72				

Field ID	Depth	Matrix Description	Date	Lab Report														
BH01	0.1	Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	1.1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	0.1	Fill	08 Dec 2022	312813	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH02	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	2	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	0.15	Fill	05 Dec 2022	312405	<0.0001	<0.0001	**0.0001**	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH03	0.5	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.15	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	0.5	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	1	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	1	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	3	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	4	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	0.1	Fill	05 Dec 2022	312405	<0.0001	<0.0001	<0.0001	<0.0001	**0.0009**	<0.0002	<0.0002	**0.0001**	<0.0002	**0.0001**	**0.0003**	**0.001**	<0.0005	**0.0002**	<0.005
BH06	0.5	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	0.5	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	1	Fill	05 Dec 2022	312405-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	3	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	0.5	Natural	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	0.1	Fill	06 Dec 2022	312491	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH09	0.5	Fill	06 Dec 2022	312491-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	2	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	4	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.1	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	0.5	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	2	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	0.1	Fill	06 Dec 2022	312491	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH13	2.7	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.1	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	3	Natural	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	2	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	0.1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	0.1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					PFAS														
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH24	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	<0.0001	<0.0001	<0.0001	<0.0001	**0.0003**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	Fill	09 Dec 2022	312813	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	**0.0009**	<0.0001	<0.005
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.4	Natural	09 Dec 2022	312813	**0.0001**	<0.0001	<0.0001	<0.0001	**0.0002**	<0.0002	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0001	<0.005
BH39	0.3	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1		Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

	PFAS																
	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.0005	0.0005	0.0001	0.0001	0.0002	0.0002	0.001	0.001	0.0002	0.001	0.001	0.0002	0.005	0.0001	0.0001	0.0001
NSW 2014 General Solid Waste CT1 (No Leaching)																
NSW 2014 General Solid Waste SCC1 (with leached)														1.8		
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																
NSW 2014 Restricted Solid Waste SCC2 (with leached)														7.2		
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report**													
BH01	**0.1**	**Fill**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH01	**1.1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813**	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH02	**1**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**2**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH02	**3**	**Natural**	**08 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	**0.15**	**Fill**	**05 Dec 2022**	**312405**	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0001**	**0.0001**	<0.0001
BH03	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.15**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**1**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**3**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	**4**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	**0.1**	**Fill**	**05 Dec 2022**	**312405**	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0009**	**0.0025**	**0.0012**
BH06	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06 - [TRIPLICATE]	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**1**	**Fill**	**05 Dec 2022**	**312405-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	**3**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.1**	**Fill**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	**0.5**	**Natural**	**05 Dec 2022**	**312405**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH09	**0.5**	**Fill**	**06 Dec 2022**	**312491-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**4**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	**5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09 - [TRIPLICATE]	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11 - [TRIPLICATE]	**0.1**	**Fill**	**09 Dec 2022**	**312813**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.1**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**0.5**	**Fill**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**2**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	**5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH13	**0.1**	**Fill**	**06 Dec 2022**	**312491**	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	<0.0001	<0.0001
BH13	**2.7**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.1**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**0.5**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**3**	**Natural**	**07 Dec 2022**	**312652-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	**4**	**Natural**	**07 Dec 2022**	**312652**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.1**	**Fill**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	**2**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17 - [TRIPLICATE]	**0.5**	**Natural**	**06 Dec 2022**	**312491**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18 - [TRIPLICATE]	**0.1**	**Fill**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	**1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	**0.1**	**Natural**	**16 Dec 2022**	**313427**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 9 - Waste Classification (Total)

					PFAS																
					Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (PFOS + PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
BH21	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	2.8	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	0.5	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	1	Natural	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23 - [TRIPLICATE]	0.1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	0.1	Fill	06 Dec 2022	312491	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	<0.0001	<0.0001
BH24	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.15	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	0.5	Natural	08 Dec 2022	312813	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0003**	**0.0003**	**0.0003**
BH28	1	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH29	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30	1	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH30 - [TRIPLICATE]	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	0.5	Fill	08 Dec 2022	312813	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0002**	**0.0002**	**0.0002**
BH31	3	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	4	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH31	5	Natural	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.1	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH32	0.3	Fill	09 Dec 2022	312813	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	<0.0001	**0.0009**	<0.0001
BH32	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH33	0.5	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.1	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH34	0.5	Fill	05 Dec 2022	312405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH35	0.7	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36	0.4	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH36 - [TRIPLICATE]	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.2	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH37	0.35	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.15	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH38	0.4	Natural	09 Dec 2022	312813	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.005	**0.0002**	**0.0003**	**0.0002**
BH39	0.3	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH40	0.5	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.25	Fill	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH41	0.4	Natural	09 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH42	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.1	Fill	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH43	0.3	Natural	06 Dec 2022	312491	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.25	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH44	0.35	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.2	Fill	07 Dec 2022	312652-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH45	0.5	Natural	07 Dec 2022	312652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH46	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH47	1	Fill	16 Dec 2022	313427	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SS1		Fill	08 Dec 2022	312813	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 10 - Waste Classification (Leached)

					PAH															Metals	
					Benzo(b+j+k)fluoranthene (filtered)	Acenaphthene (filtered)	Acenaphthylene (filtered)	Anthracene (filtered)	Benz(a)anthracene (filtered)	Benzo(a) pyrene (filtered)	Benzo(g,h,i)perylene (filtered)	Chrysene (filtered)	Dibenz(a,h)anthracene (filtered)	Fluoranthene (filtered)	Fluorene (filtered)	Indeno(1,2,3-c,d)pyrene (filtered)	Naphthalene (filtered)	Phenanthrene (filtered)	Pyrene (filtered)	PAHs (Sum of positives) (filtered)	Lead (filtered)	Nickel (filtered)
					ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL					2	1	1	1	1	1	1	1	1	1	1	1	1	1	1		30	20
NSW 2014 General Solid Waste TCLP1 (leached)										40											5,000	2,000
Field ID	**Depth**	**Matrix Description**	**Date**	**Lab Report Number**																		
BH02	**0.1**	**Fill**	**08 Dec 2022**	**312813-A**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH05	**0.1**	**Fill**	**05 Dec 2022**	**312405-B**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20
BH08	**0.1**	**Fill**	**06 Dec 2022**	**312405-B**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH11	**0.1**	**Fill**	**09 Dec 2022**	**312813-A**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH14	**0.5**	**Fill**	**06 Dec 2022**	**312491-B**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<20
BH27	**0.1**	**Natural**	**06 Dec 2022**	**312491-B**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<30	-
BH29	**0.4**	**Natural**	**09 Dec 2022**	**312813-A**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH30	**0.1**	**Fill**	**06 Dec 2022**	**312491-B**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH32	**0.1**	**Fill**	**09 Dec 2022**	**312813-A**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**60**
BH38	**0.15**	**Fill**	**09 Dec 2022**	**312813-A**	<2	**2**	<1	**3**	**1**	<1	<1	<1	<1	**3**	<1	<1	<1	**11**	**3**	**23**	-	-
BH38	**0.4**	**Natural**	**09 Dec 2022**	**312813-A**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-
BH40	**0.25**	**Fill**	**09 Dec 2022**	**312813-A**	<2	<1	<1	**3**	<1	<1	<1	<1	<1	**3**	<1	<1	<1	**10**	**2**	**18**	-	-
BH40	**0.5**	**Natural**	**09 Dec 2022**	**312813-A**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1	**1.2**	-	-
BH45	**0.2**	**Fill**	**07 Dec 2022**	**312652-B**	<2	**2**	<1	**3**	<1	<1	<1	<1	<1	**3**	<1	<1	<1	**5**	**2**	**15**	-	-
BH45	**0.5**	**Natural**	**07 Dec 2022**	**312652-B**	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0**	-	-

Environmental Standards
NSW EPA, November 2014, NSW 2014 General Solid Waste TCLP1 (leached)

D

Bore logs



ENVIRONMENTAL BOREHOLE BH01

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push Tube

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0	0.2	BH01_0.1		Fill	BITUMEN.	
					SANDY SILTY GRAVEL with trace clay: brown, slightly moist.	No odour, asbestos containing materials or staining.
					Transition to grey @ 0.9m.	
0.5	0.3	BH01_0.5				
1						Becoming more bleached through profile.
	0.2	BH01_1.1		Natural	SILTY CLAY with trace fine sand: brown, moderate cohesion, stiff, slightly moist, some grey staining w/brown/grey/orange mottled inclusions and some extremely weather shale gravels.	
1.5						
2	0.2	BH01_2.0				
2.5						
3	0.2	BH01_3.0				
					EOH @ 3.0m	

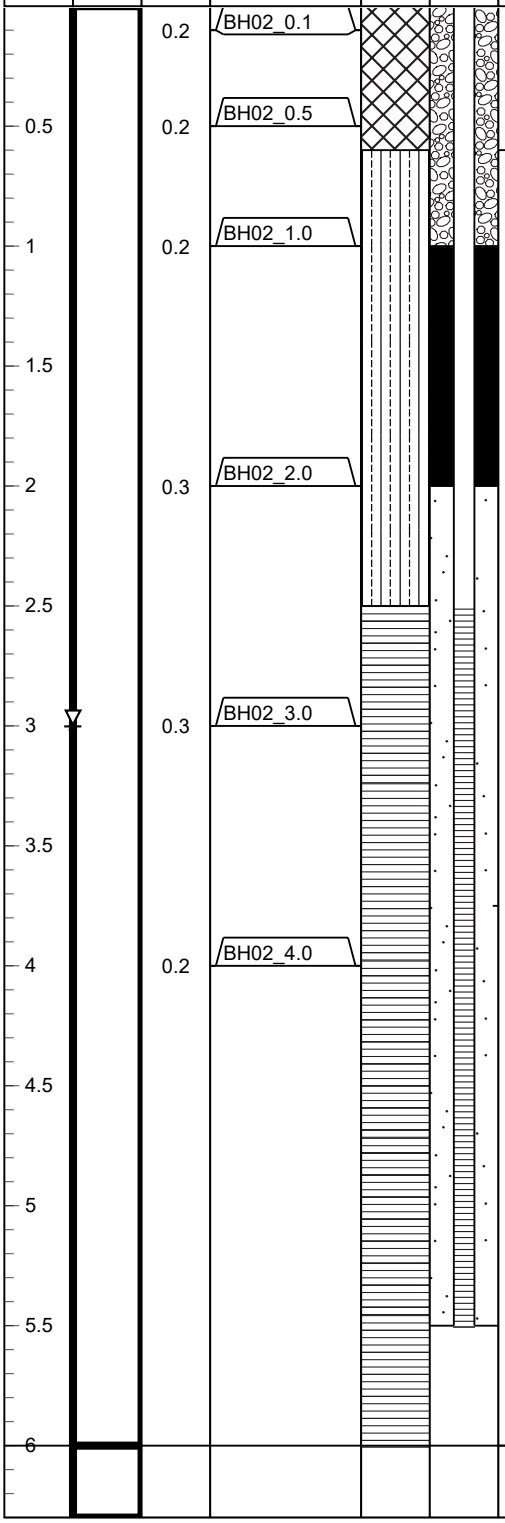
ENVIRONMENTAL BOREHOLE BH02

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 6.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger



Material Type	Material Description	Additional Observations
Fill	CLAYEY SILT with trace sand: dry - slightly moist, low plasticity.	No odour, asbestos containing materials or staining. Rootlets present
Natural	SILTY CLAY with trace fine sand: (potentially reworked) brown, moderate cohesion, stiff, slightly moist w/brown/grey/orange mottled inclusions.	No odour, anthropogenic materials or staining.
	WEATHERED SHALE: weak/extremely weathered, slightly moist-moist with brown/red/grey mottled inclusions.	Minor Balling @ 3m-5.5m Hard @ 4.5m-5.5m Collapse @ 5.5m
	EOH @ 6.0m	

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ENVIRONMENTAL BOREHOLE BH03

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0		0.2	BH03_0.15		Fill	CONCRETE/LINER.	
					Natural	SILTY CLAY with trace fine sand: brown, moderate cohesion, stiff, dry-slightly moist w/brown/grey/orange mottled inclusions.	No odour, asbestos containing materials or staining.
0.5		0.2	BH03_0.5				
1		0.2	BH03_1.0				
1.5							
						WEATHERED SHALE: grey/brown, weak/extremely weathered, dry with brown/red/grey mottled inclusions.	
2		0.2	BH03_2.0			@ 2.5m-2.8m = brown.	
2.5							
3		0.2	BH03_3.0				
						EOH @ 3.0m-target depth.	
3.5							

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ENVIRONMENTAL BOREHOLE BH04

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT, CC
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push Tube, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH04_0.15		Fill	SILTY CLAY with trace sands: dry - slightly moist, low plasticity.	No odour, asbestos containing materials or staining.
					Natural	SILTY CLAY: w/ trace fine sand, Brown, moderate cohesion, stiff, dry- slightly moist w/brown/grey/orange mottled inclusions.	
0.5		0.3	BH04_0.5				
						WEATHERED SHALE: weak/extremely weathered, dry, grey/brown in bands with brown/red/grey mottled inclusions.	
1		0.2	BH04_1.0				
1.5							
2		0.2	BH04_2.0				
2.5							Hard @ 2.8m - 3.0m
3		0.2	BH04_3.0			EOH @ 3.0m-target depth.	

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ENVIRONMENTAL BOREHOLE BH05

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPLETED 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 7.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push Tube

Depth (m)	Water Level	PID	Sample ID	Material Type	Material Description	Additional Observations
0		0.2	BH05_0.1	Fill	GRAVEL SILTY SAND: (topsoil) dark brown.	No odour, asbestos containing materials or staining. Bark and rootlets oresent.
					SILTY CLAY with trace fine sand: brown slightly moist.	
0.5		0.2	BH05_0.5			
				Natural	SILTY CLAY w/trace fine sand: brown, moderate cohesion, stiff, dry-slightly moist with brown/grey/orange mottled inclusions.	
1		0.2	BH05_1.0			
1.5						
2		0.3	BH05_2.0		WEATHERED SHALE: grey/brown in bands, weak, dry, extremely weathered with brown/red/grey mottled inclusions.	
2.5						
3		0.3	BH05_3.0			
3.5						
4		0.3	BH05_4.0			
4.5						
5		0.3	BH05_5.0			
5.5						
6		0.3	BH05_6.0			Hard @ 6m.
6.5						
7		0.3	BH05_7.0		EOH @ 7.0m	

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ENVIRONMENTAL BOREHOLE BH06

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, West Concord NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 6.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push Tube

Depth (m)	Water Level	PID	Sample ID	Material Type	Material Description	Additional Observations
0		0.2	BH06_0.1	Fill	SILTY SANDY GRAVEL: (topsoil) brown, dry, loose.	No odour, asbestos containing materials or staining.
0.5		0.4	BH06_0.5	Natural	SILTY CLAY with trace fine sands: brown, slightly moist, moderate cohesion, stiff with brown/red mottled inclusions. Extremely weathered shale gravels.	
1		0.4	BH06_1.0		WEATHERED SHALE: grey/brown in bands, weak, dry, extremely weathered with brown/red/grey mottled inclusions.	
1.5						
2		0.3	BH06_2.0			Refusal of PT @ 2.1m, extended to 6m on 9/12/2022
2.5						
3		0.3	BH06_3.0			
3.5						
4						
4.5						
5						
5.5						
6					EOH @ 6.0m	
6.5						

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ENVIRONMENTAL BOREHOLE BH07

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT, SFA
TOTAL DEPTH 7.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger (3m-7m), PT = Push Tube (0- 3.0m)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0		0.2	BH07_0.1 DUP01 TRIP01		Fill	GRAVELY SILTY SAND: (topsoil) dark brown.	Bark/organic stain/ rootlets and anthropogenic material-plastic present.
0.5		0.2	BH07_0.5			SANDY SILTY CLAY: (reworked) grey/brown, dry, moderately stiff.	No odour, asbestos containing materials or staining.
1		0.3	BH07_1.0			CLAYEY SILTY SAND: brown dry, loose.	
1.5						SILTY CLAY w/trace fine sands: (reworked) brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled.	
2		0.3	BH07_2.0			CLAYEY SANDY GRAVEL: brown/grey, wet.	
2.5						SILTY CLAY with trace fine sand: (reworked) brown, moderate cohesion, stiff, slightly moist w/brown/grey/orange mottled.	Anthropogenic material-red bricks.
3		0.2	BH07_3.0		Natural	SHALE: grey/brown, weak/weathered, slightly moist.	No odour, anthropogenic materials or staining.
3.5							
4		0.2	BH07_4.0				
4.5							
5		0.2	BH07_5.0			SANDY SHALE: grey, slightly moist, hard.	
5.5							
6		0.2	BH07_6.0				
6.5							
7		0.2	BH07_7.0				Collapsed after 2 days due to fill, Hole backfilled & no welled developed
						EOH @ 7.0m	

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ENVIRONMENTAL BOREHOLE BH08

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT, SFA
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger, PT = Push Tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH08_0.1		Fill	ASHPALT.	
						CLAYEY GRAVEL SANDS: (roadbase) brown/grey, dry, foreign gravels approximately ~30mm.	No odour, asbestos containing materials or staining.
					Natural	SILTY CLAY w/trace fine sands: brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled inclusions.	
0.5		0.3	BH08_0.5				
						WEATHERED SHALE: brown/red/grey mottled inclusions, weak, slightly moist-moist and extremely weathered.	
1		0.3	BH08_1.0				
1.5							PT refusal @1.8m
2		0.3	BH08_2.0				Hard @ 2m
2.5							Soft from 2.8m to EOH
3		0.5	BH08_3.0			EOH @ 3.0m-target depth.	

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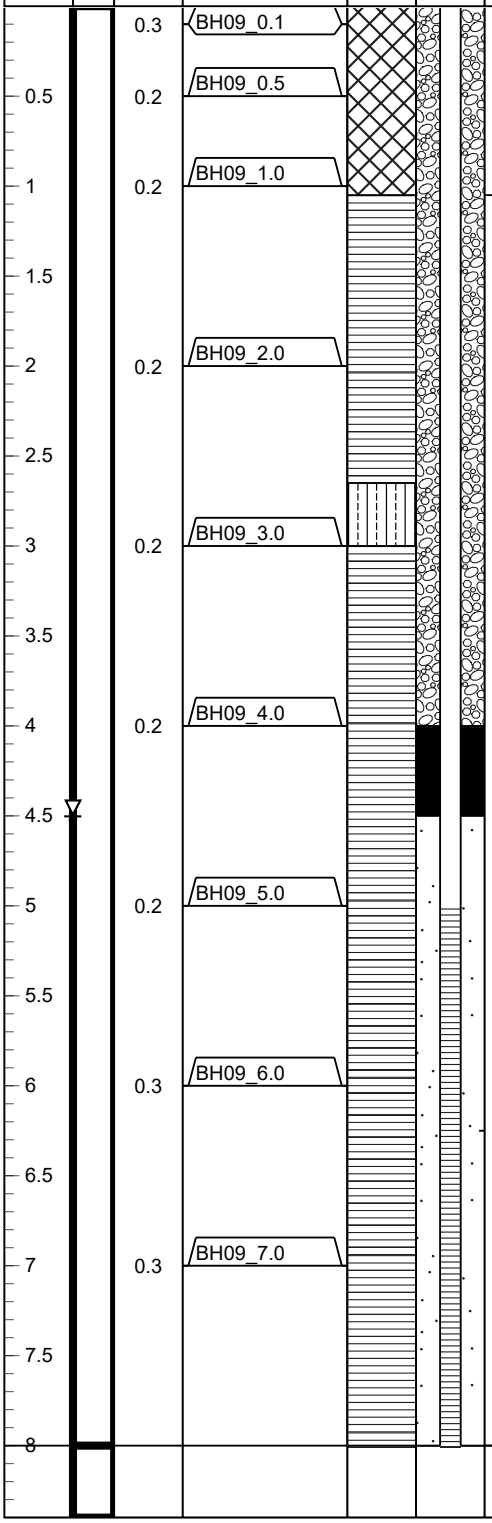
ENVIRONMENTAL BOREHOLE BH09

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT, SFA
TOTAL DEPTH 8.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger (3.0m -EOH) , PT = Push Tube (0m-3m)



Material Type	Material Description	Additional Observations
Fill	BITUMEN.	No odour, asbestos containing materials or staining.
	GRAVEL SILTY SANDS: grey/brown w/some clay pieces, and slightly moist.	
Natural	WEATHERED SHALE: brown/red/grey mottled inclusions, weak, slightly moist-moist and extremely weathered.	
	SILTY CLAY w/trace fine sand: brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled inclusions.	
	WEATHERED SHALE: weak/extremely weathered, slightly moist-moist w/brown/red/grey mottled inclusions.	Water strike @4.5m-potential ingress from tank excavation.
	EOH @ 8.0m	

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ENVIRONMENTAL BOREHOLE BH10

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 0.05 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	BITUMEN.	
						CONCRETE.	
						EOH @ 0.05m-refusal on concrete slab.	

ENVIRONMENTAL BOREHOLE BH11

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, SFA
TOTAL DEPTH 0.3 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger (0-0.05m), SFA = Solid Flight Auger (0.05-EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	BITUMEN.	
		0.2	BH11_0.1			SILTY SANDY GRAVEL w/trace clay: brown, moist.	No odour, asbestos containing materials or staining.
						EOH @ 0.3-refusal on concrete slab.	

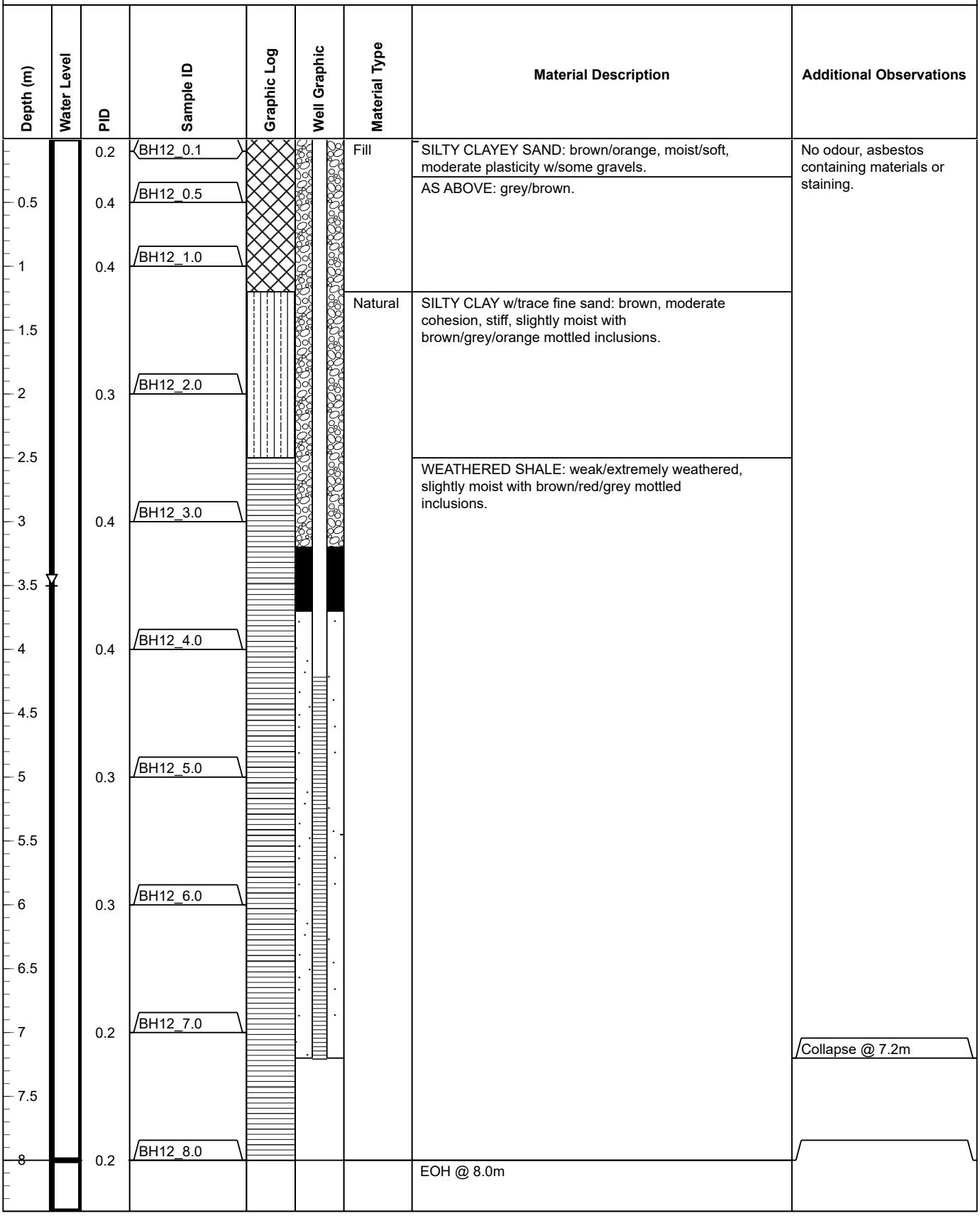
ENVIRONMENTAL BOREHOLE BH12

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 8.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger



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ENVIRONMENTAL BOREHOLE BH13

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, West Concord NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA , PT
TOTAL DEPTH 2.7 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger (0-0.05m), PT = Push tube (0.05m-EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH13_0.1		Fill	BITUMEN.	No odour, asbestos containing materials or staining.
						SANDY CLAY GRAVEL: grey/ brown, dry-slightly moist.	
0.5		0.2	BH13_0.5			SILTY CLAY w/trace sand: brown/orange/red, slightly moist-moist, stiff, high plasticity with minor foreign gravels.	
1		0.2	BH13_1.0				
1.5		0.2	BH13_1.6			FINE SILTY SAND: dry, loose, coarse.	
						SILTY CLAY w/trace sand: brown/orange/red slightly moist-moist, stiff, high plasticity with minor foreign gravels.	
					Natural	WEATHERED SHALE: weak/extremely weathered, slightly moist with brown/red/grey mottled inclusions.	
2							
2.5		0.2	BH13_2.7				
						EOH @ 2.7m-push tube refusal.	

ENVIRONMENTAL BOREHOLE BH14

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA , PT
TOTAL DEPTH 2.5 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger (0-0.05m), PT = Push tube (0.05m - EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH14_0.1		Fill	BITUMEN.	No odour, asbestos containing materials or staining.
						GRAVEL SILTY SAND: grey/brown, some clay pieces, slightly moist.	
0.5		0.2	BH14_0.5		Natural	WEATHERED SHALE: brown/orange, weak/extremely weathered, slightly moist with brown/red mottled inclusions.	
1		0.2	BH14_1.0				
1.5						SILTY CLAY with trace fine sand: brown, moderate cohesion, slightly moist, stiff with brown/orange/red mottled inclusions.	
						WEATHERED SHALE: weak/extremely weathered, slightly moist with brown/red mottled inclusions.	
2		0.2	BH14_2.0				
2.5		0.2	BH14_2.5				
						EOH @ 2.5m-push tube refusal.	

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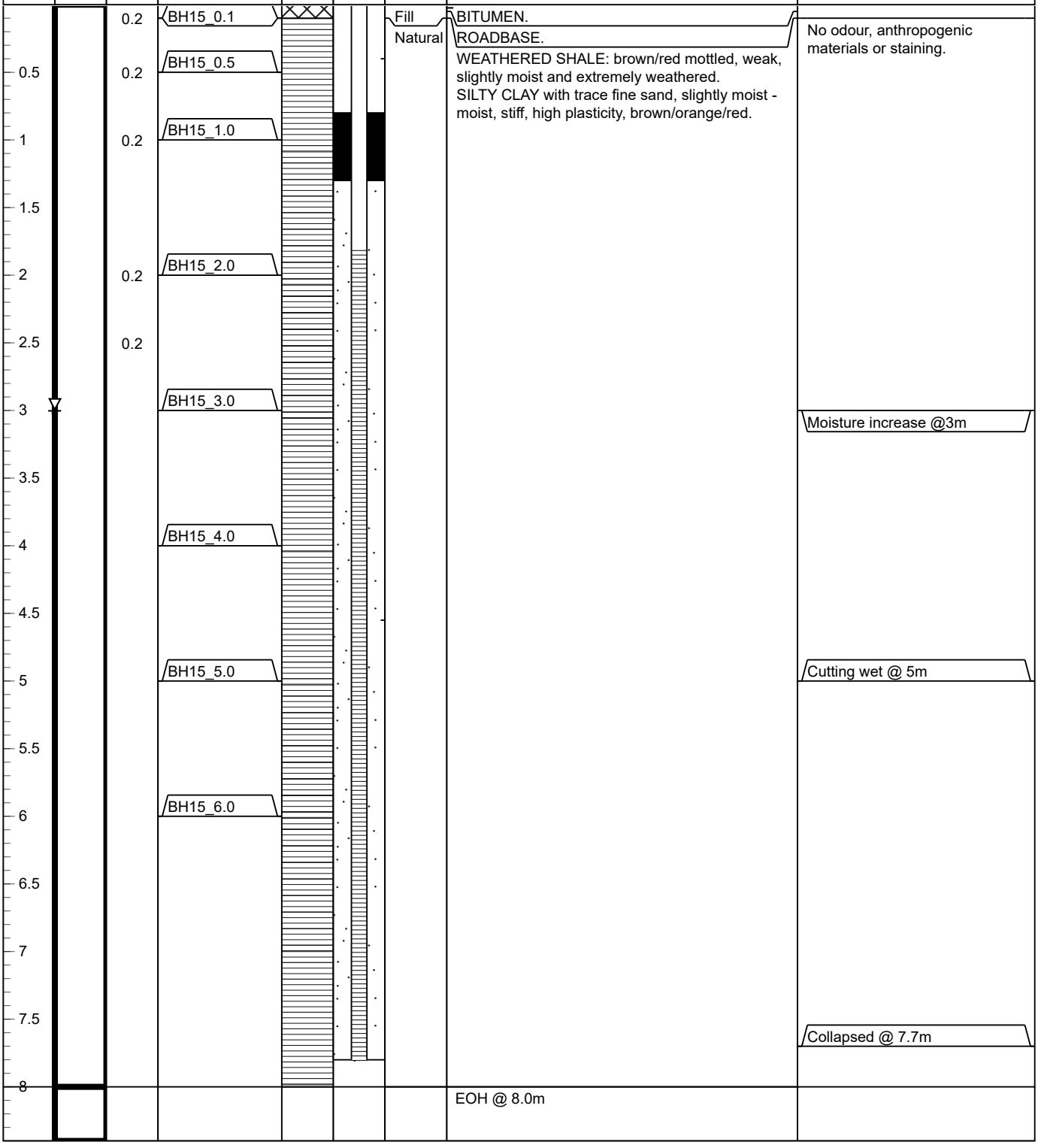
ENVIRONMENTAL BOREHOLE BH15

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, West Concord NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 8.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palmer

COMMENTS SFA = Solid Flight Auger



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ENVIRONMENTAL BOREHOLE BH16

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palmer

COMMENTS PT = Push tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH16_0.1		Fill	BITUMEN.	No odour, asbestos containing materials or staining.
						GRAVEL SILTY SAND: grey/brown, some clay pieces, slightly moist.	
					Natural	WEATHERED SHALE: brown/red mottled inclusions, weak, slightly moist and extremely weathered.	
0.5		0.3	BH16_0.5				
1		0.3	BH16_1.0				
1.5							
2		0.3	BH16_2.0				
2.5		0.3					
3			BH16_3.0			EOH @ 3.0m	

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ENVIRONMENTAL BOREHOLE BH17

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA, PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palmer

COMMENTS SFA = Solid Flight Auger (0 - 0.05m), PT = Push tube (0.05m - EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH17_0.1		Fill	BITUMEN.	No odour, asbestos containing materials or staining.
						CLAYEY SILT: (reworked shale) grey/brown, dry/compact.	tree roots present
					Natural	WEATHERED SHALE: weak/extremely weathered, slightly moist.	No odour, anthropogenic materials or staining.
0.5		0.2	BH17_0.5				
						SILTY CLAY with trace fine sand, slightly moist, stiff, moderate cohesion with brown/orange/red mottled inclusions.	
1		0.2	BH17_1.0				
						WEATHERED SHALE: weak/extremely weathered, slightly moist.	
1.5							
2		0.2	BH17_2.0				
2.5		0.2	BH17_2.5				
3						.EOH @ 3.0m	

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ENVIRONMENTAL BOREHOLE BH18

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 0.4 mbgl

LOGGED BY Mia Schaeper
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					BITUMEN.	
	0.2	BH18_0.1		Fill	WEATHERED SHALE: weak/extremely weathered, slightly moist-moist.	No odour, asbestos containing materials or staining.
	0.2	BH18_0.4			EOH @ 0.4m-refusal on hard shale.	
0.5						

ENVIRONMENTAL BOREHOLE BH19

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 2.3 mbgl

LOGGED BY Mia Schaeper
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
	0.2	BH19_0.1		Fill	BITUMEN.	
				Natural	WEATHERED SHALE: weak/extremely weathered, brown, slightly moist-moist.	No odour, asbestos containing materials or staining.
0.5	0.2	BH19_0.5				
					WEATHERED SHALE: weak/extremely weathered, dark brown, slightly moist-moist.	
1	0.2	BH19_1.0				
1.5						
2	0.2	BH19_2.0				
	0.2	BH19_2.3				
2.5					EOH @ 2.3m	

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ENVIRONMENTAL BOREHOLE BH20

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, West Concord NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 3.0 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
	0.2	BH20_0.1		Fill	BITUMEN.	
				Natural	WEATHERED SHALE: brown/red/grey mottled inclusions, weak, slightly moist-moist and extremely weathered.	No odours, anthropogenic materials or staining.
0.5	0.2	BH20_0.5				
					SILTY CLAY with trace fine sand: brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled inclusions.	
1	0.3	BH20_1.0				
1.5						
2	0.3	BH20_2.0				
					WEATHERED SHALE: dark brown/red/grey mottled, weak, slightly moist-moist and extremely weathered.	
2.5						
3	0.3	BH20_3.0			EOH @ 3.0m	

ENVIRONMENTAL BOREHOLE BH21

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord WestNSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 2.8 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
	0.1	BH21 0.1		Fill	BITUMEN.	
					GRAVELY SILTY SAND:(roadbase) brown, slightly moist, loose.	No odours, anthropogenic materials or staining.
0.5	0.2	BH21 0.5				
				Natural	SILTY CLAY w/trace fine sands: brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled inclusions.	
1	0.2	BH21 1.0				
1.5					WEATHERED SHALE: brown/red/grey mottled, weak, slightly moist-moist and extremely weathered.	
2		BH21 2.0				
2.5		BH21 2.8				
					EOH @ 2.8m-refusal.	

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ENVIRONMENTAL BOREHOLE BH22

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 2.8 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
	0.1	BH22_0.1		Fill	BITUMEN	
					GRAVELY SILTY SAND:(roadbase) brown, slightly moist, loose.	No odours, anthropogenic materials or staining.
					SILTY CLAYEY GRAVELS with some sand: brown, moist, soft, low plasticity.	
0.5	0.1	BH22_0.5				
				Natural	SILTY CLAY with trace fine sand: brown, moderate cohesion, soft, slightly moist with brown/grey/orange mottled inclusions.	
1	0.1	BH22_1.0				
1.5						
					WEATHERED SHALE: brown/red/grey mottled, weak, slightly moist-moist and extremely weathered.	
2	0.1	BH22_2.0				
2.5						
	0.1	BH22_2.8				
					EOH @ 2.8- refusal.	

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ENVIRONMENTAL BOREHOLE BH23

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA, PT
TOTAL DEPTH 2.6 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

COMMENTS PT = Push Tube (0-0.15m), SFA = Solid Flight Auger (0.15m- EOH)

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		BH23_0.1		Fill	BITUMEN.	
	0.2	DUP05			GRAVELY SILTY SAND:(roadbase) brown, slightly moist, loose.	No odours, anthropogenic materials or staining.
		TRIP05				
				Natural	SILTY CLAY: with trace fine sand: brown, moderate cohesion, soft, slightly moist w/brown/grey/orange mottled inclusions.	
0.5						
1	0.3	BH23_1.0				
					WEATHERED SHALE: brown, weak, slightly moist, soft - moderate stiffness and extremely weathered.	
1.5						
2	0.2	BH23_2.0				
					WEATHERED SHALE: dark brown, slightly moist, hard and extremely weathered.	
2.5						
	0.2	BH23_2.6				
					EOH @ 2.6m-refusal on shale.	

ENVIRONMENTAL BOREHOLE BH24

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH24_0.1		Fill	BITUMEN. CLAYEY SILT: (reworked shale) grey/brown, dry/compact.	No odour, asbestos containing materials or staining.
0.5		0.2	BH24_0.5		Natural	WEATHERED SHALE: weak/extremely weathered, slightly moist. Flakey SILTY CLAY w/trace fine sand: slightly moist, stiff, moderate cohesion with brown/orange/red mottled inclusions.	No odour, anthropogenic materials or staining.
1		0.2	BH24_1.0				
1.5							
2		0.2	BH24_2.0				
2.5							
3		0.2	BH24_3.0			.EOH @ 3.0m	

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ENVIRONMENTAL BOREHOLE BH25

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palmer

COMMENTS PT = Push tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.3	BH25_0.15		Fill	BITUMEN. CLAYEY SILT: (reworked shale) grey/brown, dry/compact. Larger rounded gravel @ 0.15m.	No odour, asbestos containing materials or staining.
					Natural	SILTY CLAY w/trace fine sand: brown/orange/red, slightly moist - moist, stiff, high plasticity.	No odour, anthropogenic materials or staining.
0.5		0.3	BH25_0.5			WEATHERED SHALE: brown/red mottled, weak, slightly moist, extremely weathered.	
1		0.3	BH25_1.0				
1.5							
2		0.3	BH25_2.0				
2.5							
3		0.2	BH25_3.0			EOH @ 3.0m	

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ENVIRONMENTAL BOREHOLE BH26

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA, PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palmer

COMMENTS SFA = Solid Flight Auger, PT = Push tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0		0.2	BH26_0.1		Fill	BITUMEN.	No odour, asbestos containing materials or staining.
						CLAYEY SILT: (reworked shale) grey/brown, dry/compact.	
					Natural	WEATHERED SHALE: weak/extremely weathered, slightly moist.	No odour, anthropogenic materials or staining.
0.5		0.3	BH26_0.5				
1		0.3	BH26_1.0				
						SILTY CLAY w/trace fine sand: slightly moist, stiff, moderate cohesion with brown/orange/red mottled inclusions.	
						WEATHERED SHALE: weak/extremely weathered, slightly moist.	
1.5							
2		0.3	BH26_2.0				
2.5							
3		0.2	BH26_3.0			EOH @ 3.0m	

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ENVIRONMENTAL BOREHOLE BH27

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD PT
TOTAL DEPTH 2.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS PT = Push tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	BITUMEN.	
			BH27_0.1			ROADBASE: angular gravels.	
		0.2	TRIP02 DUP02		Natural	SILTY CLAY w/trace fine sand: slightly moist, stiff, moderate cohesion with brown/orange/red mottled inclusions.	No odour, anthropogenic materials or staining.
0.5		0.3	BH27_0.5				
						WEATHERED SHALE: weak/extremely weathered, slightly moist-moist with brown/red/grey mottled inclusions.	
1		0.3	BH27_1.0				
1.5							
2		0.3	BH27_2.0			EOH @ 2.0m-push tube refusal.	

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ENVIRONMENTAL BOREHOLE BH28

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 6.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA= Solid Flight Auger

Depth (m)	Water Level	PID	Sample ID	Material Type	Material Description	Additional Observations
0		0.2		Fill	BITUMEN.	
				Natural	SILTY CLAY w/trace fine sand, slightly moist, stiff, flakey, moderate cohesion with brown/red mottled inclusions.	No odour, anthropogenic materials or staining.
0.5		0.3	BH28_0.5			
1		0.3	BH28_1.0		SILTY CLAY w/trace fine sand: slightly moist, stiff, moderate cohesion with brown/red mottled inclusions.	
1.5					WEATHERED SHALE: weak/extremely weathered, slightly moist-moist withbrown/red/grey mottled inclusions.	
2		0.3	BH28_2.0			
2.5						
3		0.2	BH28_3.0			
3.5						
4			BH28_4.0			
4.5						
5			BH28_5.0			
5.5						
6			BH28_6.0		EOH @ 6.0m	

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ENVIRONMENTAL BOREHOLE BH29

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA
TOTAL DEPTH 0.45 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
		0.2	BH29_0.25			SANDY GRAVEL CLAY: brown. soft, slightly moist-moist, low plasticity.	No odour, asbestos containing material or staining.
		0.2	BH29_0.4		Natural	SILTY CLAY w/trace fine sand: slightly moist, stiff, moderate cohesion with brown/orange/red mottled inclusions. WEATHERED SHALE: weak/extremely weathered, slightly moist-moist with brown/red/grey mottled inclusions.	No odours, anthropogenic materials or staining.
0.5						EOH @ 0.45m	

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ENVIRONMENTAL BOREHOLE BH30

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA, PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger, PT = Push Tube

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0		0.3	BH30_0.1		Fill	BITUMEN.	No odour, asbestos containing material or staining.
						GRAVEL SANDY SILT: brown, dry, loose.	
		0.3	BH30_0.3			SILTY CLAY w/trace fine sands: slightly moist, moderately stiff, brown.	
0.5		0.3	BH30_0.5			SILTY CLAY w/trace sand: stiff, slightly moist-moist, brown/orange/red, high plasticity.	
					Natural	WEATHERED SHALE: brown/red mottled, weak, slightly moist, extremely weathered.	No odours, anthropogenic materials or staining.
1		0.2	BH30_1.0				
						SILTY CLAY w/trace fine sands: brown, moderate cohesion, stiff, slightly moist with brown/grey/orange mottled inclusions.	
1.5							
2		0.3	BH30_2.0				
						WEATHERED SHALE: brown/red mottled, weak, slightly moist and extremely weathered.	
2.5							
3		0.3				EOH @ 3.0m-target depth.	

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ENVIRONMENTAL BOREHOLE BH31

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 6.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA= Solid Flight Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Well Graphic	Material Type	Material Description	Additional Observations
0.5		0.3	BH31_0.5			Fill	BITUMEN. CLAYEY SILT: potentially shale, light brown, dry-slightly moist. SILTY CLAY w/trace fine sands: (potentially reworked), brown/orange/red, moist, stiff, moderate plasticity. Red & brown @ 2m.	No odour, asbestos containing materials or staining.
1		0.3	BH31_1.0					
1.5								
2		0.2	BH31_2.0					
2.5						Natural	SILTY CLAY w/trace fine sands: brown/red, moist, stiff, moderate plasticity. Hard to 4.5m - soft to 5m. Very hard from 5m to EOH.	No odour, anthropogenic materials or staining.
3		0.2	BH31_3.0					
3.5								
4		0.2	BH31_4.0					
4.5	▼							
5		0.3	BH31_5.0					
5.5								
6							EOH @ 6.0m	

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ENVIRONMENTAL BOREHOLE BH32

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, West Concord NSW

DRILLING DATE 8/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA
TOTAL DEPTH 0.5 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	PAVERS.	No odour, asbestos containing material or staining.
		0.3	BH32_0.1			SAND w/trace silt: yellow, loose, slightly moist.	
						CLAYEY SANDY GRAVEL: compacted hard, brown, slightly moist.	
		0.2	BH32_0.3				
					Natural	SILTY CLAY w/trace fine sand:(potentially reworked) brown/red, slightly moist, stiff, moderate plasticity.	No odours, anthropogenic materials or staining.
		0.4	BH32_0.4				
0.5						EOH @ 0.5m-target depth.	

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ENVIRONMENTAL BOREHOLE BH33

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA, PT
TOTAL DEPTH 3.0 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger (0-0.05m) PT = Push Tube (0.05-EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH33_0.1		Fill	ASPHALT. GRAVEL SANDY SILT: brown, dry, loose.	No odour, asbestos containing material or staining.
0.5		0.3	BH33_0.5		Natural	GRAVEL SANDY SILT w/trace fine sands: brown, slightly moist, moderately stiff.	No odours, anthropogenic materials or staining.
1		0.3	BH33_1.0				
						As above, red/brown.	
1.5							
2		0.2	BH33_2.0				
2.5						WEATHERED SHALE: weak/extremely weathered, slightly moist-moist with brown/red/grey mottled inclusions.	
3		0.2	BH33_3.0			EOH @ 3.0m-target depth.	

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ENVIRONMENTAL BOREHOLE BH34

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 5/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, PT
TOTAL DEPTH 1.5 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA= Hand Auger (0-0.06m) PT = Push Tube (0.06-EOH)

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.2	BH34_0.1		Fill	GRAVEL SILTY SAND: (topsoil) brown, dry, roots and foreign gravels present.	No odour, asbestos containing material or staining.
0.5		0.3	BH34_0.5			SILTY CLAY w/trace fine sand: (potentially reworked) brown/red, slightly moist, moderate plasticity + stiff.	anthropogenic material-bricks.
1		0.2	BH34_1.0			SAND w/trace silt, moist, loose.	
1.5		0.2	BH34_1.5			EOH @ 1.5m- abandoned for safety.	

ENVIRONMENTAL BOREHOLE BH35

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD ?
TOTAL DEPTH 0.7 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE SLABS x2.	
						SILTY SANDY CLAY: (potentially reworked) brown/grey/red, moist-wet, slight plasticity, soft.	No odour, anthropogenic containing material or staining.
0.5		0.3	BH35_0.5				
		0.2	BH35_0.7			EOH @ 0.7m-target depth.	

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ENVIRONMENTAL BOREHOLE BH36

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, CC
TOTAL DEPTH 0.45 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
		0.2	BH36_0.25 DUP04 TRIP04			SILTY CLAY SAND: brown/orange, slightly moist-moist, low plasticity.	
		0.2	BH36_0.4		Natural	SILTY CLAY w/trace fine sands: potentially brown/orange/red, slightly moist - moist, stiff, high plasticity.	No odour, asbestos containing material or staining.
0.5						EOH @ 0.45m--target depth.	

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ENVIRONMENTAL BOREHOLE BH37

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, CC
TOTAL DEPTH 0.5 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	No odour, asbestos containing material or staining.
		0.3	BH37_0.2			SILTY SAND w/trace clay, brown/yellow, dry.	
		0.3	BH36_0.35		Natural	SILTY CLAY w/trace fine sands: brown/red, slightly moist-moist, soft, high plasticity.	
0.5						EOH @ 0.5m-target depth.	

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ENVIRONMENTAL BOREHOLE BH38

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, CC
TOTAL DEPTH 0.45 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
			BH38_0.15			BITUMEN GRAVELS: dry.	Bitumen odour.
		0.3				CEMENT GRAVEL FILL: gravel size >100mm	
		0.3	BH36_0.4		Natural	SILTY CLAY w/trace fine sand: brown/red/grey, slightly moist, soft, high plasticity.	Slight chemical odour. No anthropogenic containing material or staining.
0.5						EOH @ 0.45m-target depth.	

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ENVIRONMENTAL BOREHOLE BH39

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, CC
TOTAL DEPTH 0.55 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
		0.4	BH39_0.3		Natural	SILTY CLAY w/trace fine sands: (potentially reworked) brown/red/grey, slightly moist, soft, high plasticity. WEATHERED SHALE: brown/red mottled, weak, slightly moist and extremely weathered.	No odour, anthropogenic containing material or staining.
0.5		0.2	BH39_0.5				
						EOH @ 0.55m-target depth.	

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ENVIRONMENTAL BOREHOLE BH40

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD HA, CC
TOTAL DEPTH 0.55 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger, CC = Concrete Core

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
						BITUMENOUS GRAVEL.	Bitumen odour.
		0.2	BH40_0.25			LARGE CEMENT GRAVELS: lightly compacted.	
					Natural	SILTY CLAY w/trace fine sands: (potentially reworked) brown/red/grey, slightly moist, soft, high plasticity.	No odour, anthropogenic containing material or staining. POTENTIAL CROSS-CONTAMINATION FROM ABOVE
0.5		0.2	BH40_0.5				
						EOH @ 0.55m-target depth.	

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ENVIRONMENTAL BOREHOLE BH41

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 9/12/2022
DRILLING COMPANY Reditus
DRILLING METHOD HA
TOTAL DEPTH 0.45 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	
		0.4	BH41_0.25			CLAY GRAVEL SAND w/trace silt, brown, slightly moist, low plasticity.	No odour, asbestos containing material or staining.
		0.4	BH41_0.4		Natural	SILTY CLAY w/trace fine sands, brown/ red/grey, slightly moist, soft, high plasticity.	
0.5						EOH @ 0.45m-target depth.	

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ENVIRONMENTAL BOREHOLE BH42

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Reditus
DRILLING METHOD HA
TOTAL DEPTH 0.3 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
			BH42_0.1 DUP03 TRIP03		Fill	SILTY CLAY SAND: (topsoil) moist, minor gravels-poorly sorted.	
						SILTY SAND CLAY: brown/yellow, moist, low plasticity.	No odour, asbestos containing material. Organic stains/ roots present.
0.5						EOH @ 0.3m-refusal on large boulder.	

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ENVIRONMENTAL BOREHOLE BH43

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 6/12/2022
DRILLING COMPANY Reditus
DRILLING METHOD HA
TOTAL DEPTH 0.35 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
		0.3	BH43_0.1		Fill	SILTY CLAY SAND: (topsoil) moist, minor gravels-poorly sorted.	No odour, asbestos containing material or staining.
						SILTY SAND CLAY: brown/yellow, moist, low.	
		0.3	BH43_0.3		Natural	SILTY CLAY w/trace fine sand: grey/brown, slightly moist.	No odours, anthropogenic materials or staining.
0.5						EOH @ 0.35m-refusal on clay.	

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ENVIRONMENTAL BOREHOLE BH44

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Reditus
DRILLING METHOD HA
TOTAL DEPTH 0.6 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	No asbestos containing material or staining.
						GRAVEL: black, angular-potentially bituminous and some large gravels.	Bituminous odour.
		0.3	BH44_0.25				
		0.3	BH44_0.35		Natural	SILTY CLAY w/trace fine sand: brown/red/grey, slightly moist, soft, high plasticity. WEATHERED SHALE: brown/red mottled, weak, slightly moist and extremely weathered.	No odours, anthropogenic materials or staining.
						EOH @ 0.4m-target depth.	

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ENVIRONMENTAL BOREHOLE BH45

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 7/12/2022
DRILLING COMPANY Reditus
DRILLING METHOD HA
TOTAL DEPTH 0.6 mbgl

LOGGED BY Sophie MacAlpine
CHECKED BY Jack Palma

COMMENTS HA = Hand Auger

Depth (m)	Water Level	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
					Fill	CONCRETE.	No asbestos containing material or staining. Bitumen Odour.
						GRAVELS: (potential bitumen) black, angular/slat-like, some large.	
		0.3	BH45_0.2				
					Natural	SANDY SILTY CLAY: (potential rework/natural) brown/grey/red, moist, low plasticity, soft.	No odours, anthropogenic materials or staining. POTENTIAL CROSS CONTAMINATION FROM ABOVE.
0.5		0.3	BH45_0.5				
						EOH @ 0.6m-target depth.	

ENVIRONMENTAL BOREHOLE BH46

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord WestNSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 3.0 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
				Fill	SILTY CLAY SAND: (topsoil) moist, minor gravels-poorly sorted.	Same spot as BH42 hence no 0.1 sample
					SILTY SAND CLAY: brown/yellow, moist, low plasticity.	No odours, anthropogenic materials or staining.
0.5	0.1	BH46_0.5				
1	0.2	BH46_1.0 DUP06 TRIP06				
				Natural	WEATHERED SHALE: brown, weak, slightly moist, soft - moderate stiffness and extremely weathered.	
1.5						
2	0.1	BH46_2.0				
2.5						
3	0.1	BH46_3.0			EOH @ 3.0m-target depth.	

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ENVIRONMENTAL BOREHOLE BH47

PROJECT NUMBER 22038
PROJECT NAME Detailed Site Investigation
CLIENT Billbergia Pty Ltd
ADDRESS 1 King Street, Concord West NSW

DRILLING DATE 16/12/2022
DRILLING COMPANY Stratacore
DRILLING METHOD SFA
TOTAL DEPTH 2.2 mbgl

LOGGED BY Tiarni Wiersma
CHECKED BY Jack Palma

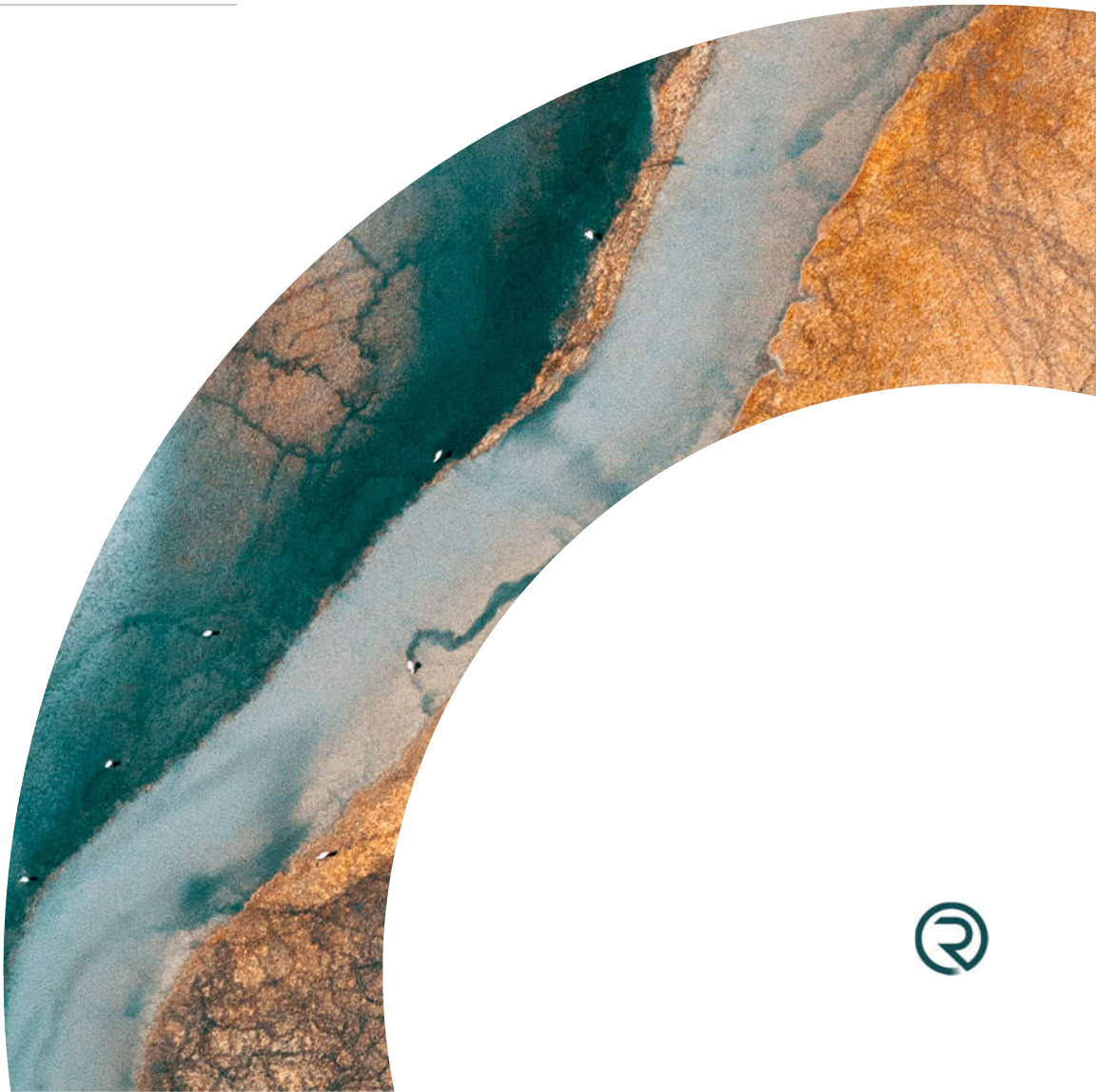
COMMENTS SFA = Solid Flight Auger

Depth (m)	PID	Sample ID	Graphic Log	Material Type	Material Description	Additional Observations
0.5	0.1	BH47_0.5		Fill	SANDY CLAYEY SILT: brown, slightly moist and some gravels.	No odours, anthropogenic materials or staining.
1	0.2	BH47_1.0			SILTY SAND w/some clay: yellow/brown, moist.	
1.5				Natural	SILTY CLAY w/ trace fine sand: brown, moderate cohesion, soft, slightly moist, brown/yellow.	
2	0.2	BH47_2.0				
	0.2	BH47_2.2			WEATHERED SHALE: brown/red/grey mottled, weak, hard, slightly moist-moist, and extremely weathered.	
2.5					EOH @ 2.2m	

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E

PAH Source Analyst



Appendix E - PAH Source Analyst

Method A - Correlation Coefficient

	Black Coal Tar 1	Black Coal Tar 2	Black Coal Tar 3	Brown Coal Tar	Steelworks Tar 1	Steelworks Tar 2	Weathered Coal Tar	Creosote 1	Creosote 2	Weathered Creosote	Ash form Black Coal	Ash from Black Coal	Ash from Black Coal	Ash from Brown Coal	Bitumen	Coke	Waste Oil Petrol	Waste Oil Diesel
BH02_0.1	0.06	0.57	0.87	-0.27	0.38	0.31	0.31	0.26	-0.08	0.34	0.86	0.89	0.91	0.94	0.06	**0.94**	0.37	0.58
BH08_0.1	0.06	0.39	0.69	-0.28	0.20	0.24	0.08	-0.01	-0.22	0.08	0.67	0.70	0.75	**0.73**	0.08	0.80	0.61	0.40
BH11_0.1	-0.20	0.18	**0.42**	-0.35	-0.07	0.02	-0.15	-0.24	-0.38	-0.17	**0.45**	**0.45**	**0.55**	**0.63**	-0.08	**0.60**	0.17	0.12
BH18_0.1	0.06	0.52	**0.81**	-0.25	0.36	0.39	0.22	0.22	-0.08	0.31	**0.91**	**0.89**	**0.93**	**0.93**	0.13	**0.97**	0.57	0.81
BH29_0.4	-0.12	0.26	0.54	-0.33	-0.03	0.07	-0.10	-0.20	-0.36	-0.13	0.51	0.53	0.62	0.67	-0.01	**0.68**	0.29	0.16
BH30_0.1	0.10	0.50	0.76	-0.24	0.28	0.19	0.26	0.12	-0.11	0.21	0.73	0.77	0.82	**0.81**	0.24	0.84	0.52	0.52
BH38_0.15	0.09	0.61	**0.91**	-0.25	0.42	0.33	0.37	0.33	-0.03	0.41	**0.87**	**0.92**	**0.92**	**0.94**	0.04	**0.95**	0.36	0.61
BH38_0.4	0.22	0.70	**0.94**	-0.13	0.62	0.46	0.57	0.59	0.20	0.66	**0.97**	**0.99**	**0.95**	**0.94**	0.14	**0.95**	0.39	0.86
BH40_0.25	0.23	0.72	0.98	-0.14	0.60	0.37	0.61	0.57	0.18	0.64	0.88	0.96	0.91	0.90	0.07	**0.90**	0.24	0.67
BH40_0.5	0.26	0.72	0.95	-0.10	0.67	0.47	0.64	0.65	0.24	0.72	0.94	0.98	0.93	**0.90**	0.14	0.91	0.33	0.85
BH45_0.2	0.13	0.61	**0.88**	-0.19	0.51	0.50	0.39	0.47	0.09	0.54	**0.99**	**0.96**	**0.94**	**0.95**	0.07	**0.97**	0.34	0.85
BH45_0.5	0.14	0.59	**0.85**	-0.18	0.50	0.53	0.35	0.45	0.08	0.51	**0.98**	**0.94**	**0.94**	**0.94**	0.08	**0.97**	0.38	0.85

F

EIL Calculations



Appendix F – EIL Calculations

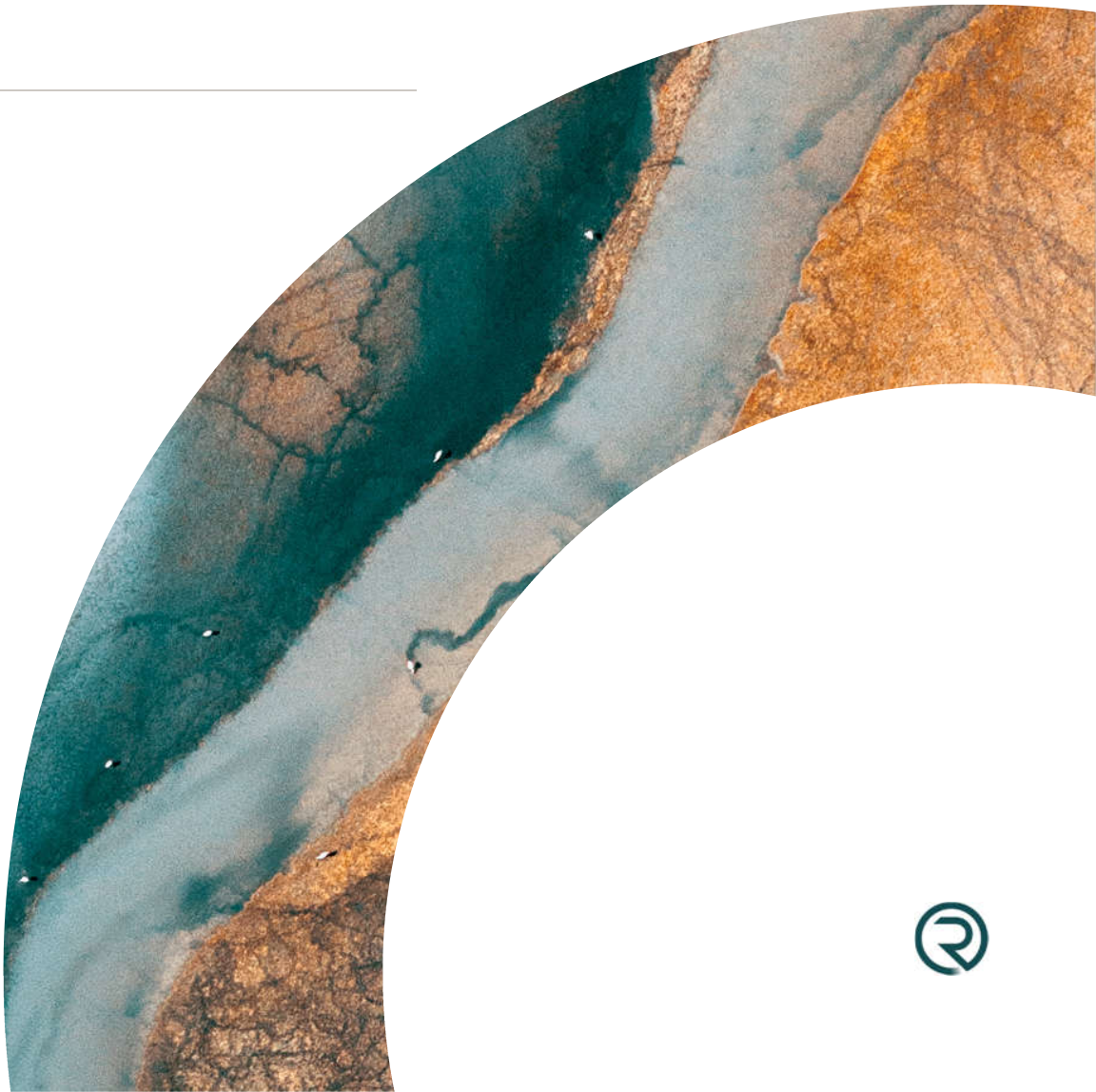
Outputs		
Land use	Ni soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	30
Urban residential and open public spaces	#NUM!	160
Commercial and industrial	#NUM!	280

Outputs		
Land use	Zn soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	160
Urban residential and open public spaces	#NUM!	280
Commercial and industrial	#NUM!	370

Outputs		
Land use	Cu soil-specific EILs (mg contaminant/kg dry soil)	
	Fresh	Aged
National parks and areas of high conservation value	#NUM!	55
Urban residential and open public spaces	#NUM!	100
Commercial and industrial	#NUM!	140

G

Field Sheets & Meteorological Data



REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	19/12/22	Time: arrive	depart
Project Name:	D81 -22038	Project Number:	22038
Site Location:		Operator:	
Well ID:	MW01	Weather:	rainy, cloudy (showers)

Equipment

Water quality equipment description:

Interface probe number:

Purging equipment: (please circle) Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
5.47 m (-) 2.115 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 12:05 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	12:09	6.45	18.8	3.28	0.40	95.7	2.40	clear, no odour / sheen
3	12:18	6.35	18.6	1.71	0.67	90.1	2.81	"
5	12:29	5.72	18.6	1.09	1.31	92.8	3.28	"
8	12:35	5.71	18.6	1.16	1.43	97.0	3.57	"
9	12:39	5.86	18.6	1.22	1.51	97.2	3.72	"
10	12:42	5.91	18.6	1.27	1.53	97.1	3.89	", green tinge, organic odour.
11	12:46	5.97	18.7	1.34	1.53	97.0	4.00	"
12	12:48	6.01	18.7	1.42	1.60	96.8	4.09	"
13	12:50	6.07	18.8	1.48	1.67	96.3	4.19	"
14	12:53	6.11	18.8	1.65	1.69	96.3	4.27	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

15 **Total Well Volume**
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	19/12/22	Time: arrive	8:00 depart
Project Name:	22038 - DSI	Project Number:	22038
Site Location:	1 King St Concord West	Operator:	KS
Well ID:	MW02	Weather:	Cloudy

Equipment

Water quality equipment description: YSI Pro

Interface probe number: Solinst 122

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
_____ m (-) 2.46 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 10:20 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	10:29	5.58	20.4	7.80	1.30	61.8	2.98	cloudy, brown, no odour
3	10:39	5.54	20.4	6.05	3.42	75.4	3.44	"
5	10:45	5.62	20.4	4.76	3.76	90.5	3.51	"
7	10:50	5.53	20.4	4.31	2.61	102.7	3.59	"
10	11:01	5.45	20.5	4.59	3.03	117.3	3.75	
11	11:03	5.42	20.5	4.67	3.01	119.3	3.77	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers: TRH, BTEX PAH, metal's
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date: 19/12/22	Time: arrive 8:00 depart
Project Name: 2x DSI, 1 King St	Project Number: 22038
Site Location: 1 King St, Concord West	Operator: KS
Well ID: MW03	Weather: Cloudy

Equipment

Water quality equipment description: YSI Pro

Interface probe number: Solinst 122

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
6.54 m (-) 1.965 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: ~~9:10~~ 9:13 Ending purge time: 10:03

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	9:16	~~5.94~~ 5.94	20.2	6.24	0.19	165.7	2.32	clear, no odour
3	9:23	5.75	20.2	5.91	0.29	144.4	2.60	"
6	9:34	5.72	20.2	5.65	0.27	130.2	3.03	cloudy, no sheen, no odour
7	9:38	5.67	20.3	5.51	1.24	129.1	3.16	"
9	9:46	5.66	20.3	4.52	2.17	126.4	3.42	"
10	9.50	5.69	20.4	4.42	2.42	125.6	3.51	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers: Full suite (PFAs, Cyanide, Phenols)
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	20/12/22	Time: arrive	depart
Project Name:	DSI-22038	Project Number:	22038
Site Location:	1 King St Concord West	Operator:	KS
Well ID:	MW04	Weather:	P. Cloudy

Equipment

Water quality equipment description:

Interface probe number:

Purging equipment: (please circle) Bailer type: **Plastic** **Teflon**

Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column

7.87 m (-) 1.04 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume

_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 12:35 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	12.40	6.23	21.1	13.71	0.46	69.3	1.36	clear
3	12:52	6.19	20.8	13.60	0.65	66.9	1.85	"
5	1:02	6.19	21.1	13.76	0.85	64.7	1.95	"
8	1:12	6.18	20.6	13.95	0.90	63.9	2.12	"
10	1:20	6.15	20.7	17.64	0.88	62.5	2.19	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

12 **Total Well Volume**
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers: Full suite
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information			
Date:	20/12/22	Time: arrive	depart
Project Name:	DSI - 22038	Project Number:	22038
Site Location:	1 King St Concord West	Operator:	K.S
Well ID:	MW05	Weather:	P. Cloudy

Equipment						
Water quality equipment description:						
Interface probe number:						
Purging equipment: (please cirlce)	Bailer type:	Plastic	Teflon			
	Pump type:	Peristaltic	Submersible	Micro-purge	Amazon	Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.02 m (-) 0.69 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 2:00 | Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	2:05	6.23	21.6	16.31	0.62	24.2	1.30	clear, no odour
4	2:16	6.25	21.4	16.24	0.80	19.4	1.60	"
6	2:28	6.22	21.0	16.08	0.88	16.4	1.92	"
8	2:32	6.22	20.9	16.02	0.88	15.9	2.08	"
10	2:39	6.22	20.8	16.01	0.88	15.4	2.27	"
								sampled
Stabilisation Criteria		+/- 0.05	+/- 10%	+/- 3%	+/- 10%	+/- 10%		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA

Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	(Y)	N		Duplicate sample ID DUP1 / TRIP1

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	20/12/22	Time: arrive 7:45	depart
Project Name:	22038-DSI	Project Number:	22038
Site Location:	1 King St Concord West	Operator:	KS
Well ID:	MW06	Weather:	P. Cloudy

Equipment

Water quality equipment description: YSI PRO

Interface probe number: Solinst 122

Purging equipment: (please cirlce)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.67 m (-) 0.49* m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 8:20 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	8:28	6.17	20.9	15.35	0.37	57.0	0.87	cloudy, brown, slight metallic odour
2	8:33	6.17	20.9	15.30	0.51	48.8	0.93	" Clear, slight metallic odour
5	8:44	6.18	20.8	15.28	0.69	41.8	1.00	" "
~~10~~	8:59	6.18	20.9	15.17	0.86	38.6	1.03	" "
12	9:03	6.17	20.9	15.16	0.86	38.8	1.03	" "
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

13 **Total Well Volume**
Actual amount of water prior to sampling

*pH, temp, cond readings not necessary if well is purged dry

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers: Full suite (PFAS, Cyanide, phenols)
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

Groundwater - well sampling data form.cdr 11/04

* SWL near surface when cap removed, pressure in well, fell to 0.49m after 5 min equilibrating w/ atmospheric pressure

REDITUS Groundwater Monitoring Field Sheet

Job Information	
Date: 19/12/22	Time: arrive 8:00 depart
Project Name: DSI -22038	Project Number: 22038
Site Location:	Operator: K.S
Well ID: MW07	Weather: Cloudy

Equipment						
Water quality equipment description: YSI Pro						
Interface probe number: Solinst 122						
Purging equipment: (please cirlce)	Bailer type:	**Plastic**	**Teflon**			
	Pump type:	**Peristaltic**	**Submersible**	**Micro-purge**	**Amazon**	**Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
3.47 m (-) 3.27 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 3:07 | Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	3:12	6.23	20.3	7.09	0.29	124.2	3.44	clear
3	3:32	6.24	20.1	5.94	3.06	107.9	4.19	"
5	3:41	6.21	20.3	6.10	2.82	107.1	4.44	"
6	3:44	6.20	20.2	6.18	2.67	106.8	4.53	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? Y N NA | Was the well dry purged? Y N NA

Field QC Checks				
Was pre-cleaning sampling equipment used for these samples?	Y	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	NA	
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date: 19/12/22	Time: arrive depart
Project Name: DSI	Project Number: 22038
Site Location:	Operator: K. Siver
Well ID: MW08	Weather: P. Cloudy

Equipment

Water quality equipment description: YSI Pro

Interface probe number: Solinst 122

Purging equipment: (please cirlce)
Bailer type: **Plastic** Teflon
Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
5.54 m (-) 5.10 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	2:26	6.51	23.9	3.10	2.71	108.7	5.35	grab sample ~~unable to obtain physio chemical parameters~~ slow recovery, small water column, samples and physiochemical obtained via plastic bailer
Stabilisation Criteria	**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**			**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? Y N NA

Was the well dry purged? Y N NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	Y	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	NA	x1 TRH PAH, 8 metals bottles
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	20/12/22	Time: arrive	7:45 depart
Project Name:	DSI -22038	Project Number:	22038
Site Location:	1 King St Concord West	Operator:	KS
Well ID:	EW1	Weather:	D. Cloudy

Equipment

Water quality equipment description: YSI Pro

Interface probe number: Solinst 122

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
7.65 m (-) 0.83 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 9:45 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
1	9:49	6.22	21.9	16.28	0.48	21.5	0.87	Clear, slight odour, hydrocarbon?
3	9:54	6.17	22.0	16.36	0.61	21.5	0.87	"
5	9:59	6.21	22.1	16.30	0.74	21.1	0.87	"
~~8~~	~~10:11~~	~~6.21~~	~~22.2~~	~~17.36~~	~~0.82~~			
8	10:14	6.23	22.2	16.30	0.83	17.2	0.87	"
10	10:17	6.23	22.2	16.11	0.83	13.0	0.87	"
13	10:25	6.26	22.3	16.11	0.80	8.4	0.87	"
14	10:28	6.26	22.3	16.10	0.81	7.8	0.87	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

Well construction:
0 - 2.9 casing
2.9 - 5.65 screen

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	20/12/22	Time: arrive 7:45	depart
Project Name:	22038 - DSI	Project Number:	22038
Site Location:	1 King st Concord West	Operator:	KS
Well ID:	EW2	Weather:	P. Cloudy

Equipment

Water quality equipment description:

Interface probe number:

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
6.30 m (-) 1.41 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: 7:17 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
~~1~~	3:27	6.22	20.2	15.26	0.81	20.3	2.40	cloudy, brown, no odour
3	3:36	6.12	20.2	15.19	0.92	20.7	2.83	"
5	3:48	6.16	20.3	14.61	1.19	32.9	3.15	", slow recharge
7	3:53	6.21	19.8	12.85	1.61	38.8	3.49	"
10	4:04	6.19	19.8	10.95	1.59	40.5	3.57	"
11	4:07	6.20	19.8	10.94	1.52	41.2	3.64	"
								sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

Total Well Volume
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

0-3.5 casing
3.5-6.30 screen

REDITUS Groundwater Monitoring Field Sheet

Job Information

Date:	20/12/22	Time: arrive	7:45 depart
Project Name:	DSI - 22038	Project Number:	22018
Site Location:	1 King St, Concord WEA	Operator:	KS
Well ID:	EW3	Weather:	P. Cloudy

Equipment

Water quality equipment description:

Interface probe number:

Purging equipment: (please circle)
Bailer type: **Plastic** **Teflon**
Pump type: **Peristaltic** **Submersible** **Micro-purge** **Amazon** **Other:**

Well Gauging and Purge Volume Calculations

Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3

Volume of water in well / V = Pr x r x h
V = volume in litres
P = 3.14159
r = radius in cm
h = height of water column in cm

Total Well Depth (-) Water level (=) Water Column
6.65 m (-) 0.60 m (=) _____ m

Water Column (x) Conversion Factor (=) Litres per 1 Well Volume
_____ m (x) _____ (=) _____ L

Water Quality Parameters

Beginning purge time: ~~10~~ 11:00 Ending purge time:

Litres	Time	pH	Temp C°	Cond mS/cm	DO ppm	Redox mV	Depth to water mbtoc	Comments
2	11:07	6.21	21.8	17.06	0.77	16.9	1.11	cloudy, brown, no odour
5	11:24	6.19	21.4	16.47	0.91	15.8	1.27	clear, no odour
7	11:29	6.20	21.4	16.52	0.89	16.0	1.30	
11	11:43	6.21	21.4	16.47	0.89	16.5	1.31	~~Sampled~~ Sampled
Stabilisation Criteria		**+/- 0.05**	**+/- 10%**	**+/- 3%**	**+/- 10%**	**+/- 10%**		**Example Comments:** clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour

8 **Total Well Volume**
Actual amount of water prior to sampling

**pH, temp, cond readings not necessary if well is purged dry*

Did field parameters stabilise? (Y) N NA Was the well dry purged? Y (N) NA

Field QC Checks

Was pre-cleaning sampling equipment used for these samples?	(Y)	N	NA	Sample containers:
Was pre-cleaning sampling equipment properly protected from contamination?	(Y)	N	NA	
Was documentation of equipment conducted?	(Y)	N	NA	
Were air bubbles present in vials at time of collection?	Y	(N)	NA	
Was sample for metals field filtered prior to preservations?	(Y)	N	NA	
Duplicate sample collected?	Y	(N)		Duplicate sample ID

0 - 3.5 Bl. Casing
3.5 - 6.65 screen

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **21B104020**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper		
	Settings		
Software	Version		
Data logger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		386467	pH 6.94
2. pH 4.00		pH 4.00		389384	pH 3.97
3. mV		237.36mV		393734/393728	237.3mV
4. EC		2.76mS		396172	2.765mS
5. D.O		0.0%		12110	0.0%
6. Temp		20.6°C		MultiTherm	20.9°C

Calibrated by: **Adam Nikolic**

Calibration date: **16/12/2022**

Next calibration due: **17/06/2023**

GAS MONITORING RECORD SHEET

REDITUS

Field Gas Monitoring Form

Site :	1 King Street, Concord West	**Ground Conditions :**	
Job No :	22038	**Weather :**	Partly Cloudy
Date :	19-Dec-22	**Pressure :**	1024
Instrumentation :	GFM 436 **Serial Nos :**		
		Start :	1024 **mb at** 8:40am
		Finish :	1020 **mb at** 4:30pm

Hole :	MW03	**Flow :**	0.1	**l/hr**	**Hole :**	MW07	**Flow :**	0.1	**l/hr**
Response Zone :		**to**			**Response Zone :**		**to**		
MP State :	Good	**R of C :**			**MP State :**	Good	**R of C :**		
SWL :	1.965	**MP Depth**	6.54	**m**	**SWL :**	3.27	**MP Depth**	3.27	**m**
Sample :	MW03	**BG O_2 :**	20.9	**% v/v**	**Sample :**	MW07	**BG O_2 :**	20.9	**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30	0	0	13.1	16.1	**30**	0	0	10.5	13.3
60	4.7	0.2	13.2	16.2	**60**	0	0	10.5	13.3
90	10.1	0.4	13.2	16.2	**90**	0	0	10.4	13.2

Hole :	MW02	**Flow :**	0.1	**l/hr**	**Hole :**	MW06	**Flow :**	0.1	**l/hr**
Response Zone :		**to**			**Response Zone :**		**to**		
MP State :	Good	**R of C :**			**MP State :**	Good	**R of C :**		
SWL :	2.46	**MP Depth**	6.86	**m**	**SWL :**	0.49	**MP Depth**	7.67	**m**
Sample :	MW02	**BG O_2 :**	20.9	**% v/v**	**Sample :**	MW06	**BG O_2 :**	20.9	**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30	0	0	11.4	17.7	**30**	0	0	9.5	15.6
60	0.6	0	11.5	17.7	**60**	0	0	9.5	15.7
90	1.3	0	11.5	17.7	**90**	0	0	9.4	15.7

Hole :	MW08	**Flow :**	0.1	**l/hr**	**Hole :**	MW04	**Flow :**	0.1	**l/hr**
Response Zone :		**to**			**Response Zone :**		**to**		
MP State :	Good	**R of C :**			**MP State :**	Good	**R of C :**		
SWL :	5.1	**MP Depth**	5.54	**m**	**SWL :**	1.04	**MP Depth**	7.87	**m**
Sample :	MW08	**BG O_2 :**	20.9	**% v/v**	**Sample :**	MW04	**BG O_2 :**	20.9	**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30	0	0	7	14.1	**30**	0	0	4.9	18.8
60	0	0	6.8	14.2	**60**	0	0	4.8	18.8
90	0	0	6.8	14.3	**90**	0	0	4.8	18.8

NOTES :

1 (MW3) CO 214 ppm, HEX 0.025%, PID 1.1
2 (MW2) CO 16 ppm, H2S, O, HEX 0.020%, PID cf 1.0
3 (MW8) HEX 0.0010%, PD cf 1.0
4 (MW7) CO 24 ppm, HEX 0.016%, PID cf 1.0
5 (MW6) CO 15 ppm
6 (MW4) - CO 24 ppm, HEX 0.008%, PID cf 1.0

Operator : Kyle Sier

GAS MONITORING RECORD SHEET

REDITUS

Field Gas Monitoring Form

Site :	1 King Street, Concord West	**Ground Conditions :**	
Job No :	22038	**Weather :**	Partly cloudy
Date :	19/12/2022	**Pressure :**	
Instrumentation :	GFM 436 **Serial Nos :**		
		Start : 8:40am	**mb at** 1024
		Finish : 4:30pm	**mb at** 1020

Hole :	MW05	**Flow :**	0.1	**l/hr**	**Hole :**		**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**				**to**	
MP State :	Good	**R of C :**			**MP State :**	Good	**R of C :**			
SWL :	0.69	**MP Depth**	7.02	**m**	**SWL :**		**MP Depth :**			**m**
Sample :	MW05	**BG O_2 :**	20.9	**% v/v**	**Sample :**		**BG O_2 :**	20.9		**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30	0	0	8.9	15.4	**30**				
60	0	0	8.8	15.4	**60**				
90	0	0	8.8	15.4	**90**				

Hole :	MW01	**Flow :**	0.1	**l/hr**	**Hole :**		**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**				**to**	
MP State :	Good	**R of C :**			**MP State :**		**R of C :**			
SWL :	2.115	**MP Depth**	5.47	**m**	**SWL :**		**MP Depth :**			**m**
Sample :	MW01	**BG O_2 :**	20.9	**% v/v**	**Sample :**		**BG O_2 :**			**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30	0	0	0.1	20.5	**30**				
60	0	0	0.1	20.5	**60**				
90	0	0	0.1	20.5	**90**				

Hole :		**Flow :**		**l/hr**	**Hole :**		**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**				**to**	
MP State :		**R of C :**			**MP State :**		**R of C :**			
SWL :		**MP Depth :**		**m**	**SWL :**		**MP Depth :**			**m**
Sample :		**BG O_2 :**		**% v/v**	**Sample :**		**BG O_2 :**			**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30					**30**				
60					**60**				
90					**90**				

NOTES :

1 (MW5) 0.008%, PID cf 1.0, CO 33 ppm
2 (MW1) HEX 0.008%, PID 1.0
3
4
5
6

Operator : Kyle Sier

GAS MONITORING RECORD SHEET

REDITUS

Field Gas Monitoring Form

Site :	1 King Street, Concord West	**Ground Conditions :**	
Job No :	22038	**Weather :**	Cloudy
Date :	1-Mar-23	**Pressure :**	
Instrumentation :	GFM436 **Serial Nos :**		
		Start : 8:07am	**mb at** 998
		Finish : 10:35	**mb at** 1006

Hole :	MW02	**Flow :**	Peak 23.8	**l/hr 18.8**	**Hole :**	MW03	**Flow :**	Peak 10.7	**l/hr 5.9**
Response Zone :			**to**		**Response Zone :**			**to**	
MP State :		**R of C :**			**MP State :**		**R of C :**		
SWL :	2.15	**MP Depth**	6	**m**	**SWL :**	1.53	**MP Depth**	6.57	**m**
Sample :	MW02	**BG O_2 :**	18.4	**% v/v**	**Sample :**	MW03	**BG O_2 :**	18.3	**% v/v**

Time (secs)	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**	**Time (secs)**	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**
30		0.1	10.2	15.4	**30**		0.2	15.7	13.1
60		0.1	10.1	15.4	**60**		0.2	15.4	13.2
90		0.1	10	15.4	**90**		0.2	15.1	13.4

Hole :	MW08	**Flow :**	0.1	**l/hr 0.1**	**Hole :**	MW07	**Flow :**	Peak 0.1	**l/hr 0.1**
Response Zone :			**to**		**Response Zone :**			**to**	
MP State :		**R of C :**			**MP State :**		**R of C :**		
SWL :	4.1	**MP Depth**	5.54	**m**	**SWL :**	3.11	**MP Depth**	5.47	**m**
Sample :	MW08	**BG O_2 :**	18.7	**% v/v**	**Sample :**	MW07	**BG O_2 :**	18.8	**% v/v**

Time (secs)	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**	**Time (secs)**	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**
30		0	13	7.8	**30**		0	12.8	4.7
60		0	13.1	7.7	**60**		0	12.7	4.5
90		0	13.1	7.6	**90**		0	12.7	4.6

Hole :	MW06	**Flow :**	-5.2	**l/hr 3.9**	**Hole :**	MW05	**Flow :**	18.4	**l/hr 12.0**
Response Zone :			**to**		**Response Zone :**			**to**	
MP State :		**R of C :**			**MP State :**		**R of C :**		
SWL :	0.27	**MP Depth**	7.67	**m**	**SWL :**	0.82	**MP Depth**	7.02	**m**
Sample :	MW06	**BG O_2 :**	19.1	**% v/v**	**Sample :**	MW05	**BG O_2 :**	18.8	**% v/v**

Time (secs)	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**	**Time (secs)**	**LEL (%)**	**CH4 (% v/v)**	**CO2 (% v/v)**	**O2 (% v/v)**
30		0			**30**		0	4.6	16.8
60					**60**		0	4.6	16.8
90					**90**		0	4.5	16.8
					120				
					150				

NOTES :

1 (MW2) H2S, CO: 30 sec 1,4
2 (MW3) H2S, CO: 30 sec 1,26. 60 sec 1, 26. 90 sec 1, 25
3 (MW8) H2S, CO: 30 sec 1,1 60 sec 1,1 90 sec 1,1
4 (MW7) H2S, CO: 30 sec 0,1. 60 sec 1,1 90 sec 0,1
5 (MW6) H2S, CO: 30 sec water in well (unable to take reading)
6

Operator : Sophie Macalpine/ Mia Schaeper

GAS MONITORING RECORD SHEET

REDITUS

Field Gas Monitoring Form

Site :		**Ground Conditions :**	
Job No :	22038	**Weather :**	Cloudy
Date :	1-Mar-23	**Pressure :**	
Instrumentation :	GFM 436	**Serial Nos :**	
		Start :	8:07 **mb at** 998
		Finish :	10:35 **mb at** 1006

Hole :	MW04	**Flow :**	20.3	**l/hr 15.1**	**Hole :**		**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**			**to**		
MP State :		**R of C :**			**MP State :**	WP	**R of C :**			
SWL :	1.32	**MP Depth**	7.87	**m**	**SWL :**		**MP Depth :**			**m**
Sample :	MW04	**BG O_2 :**	18.9	**% v/v**	**Sample :**		**BG O_2 :**			**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30		0	2.3	17.8	30				
60		0	2.3	17.8	60				
90		0	2.3	17.8	90				

Hole :	MW01	**Flow :**	0.1	**l/hr 0.1**	**Hole :**	EW3	**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**			**to**		
MP State :		**R of C :**			**MP State :**		**R of C :**			
SWL :	1.87	**MP Depth**	5.47	**m**	**SWL :**		**MP Depth**	3.7		**m**
Sample :		**BG O_2 :**	18.9	**% v/v**	**Sample :**		**BG O_2 :**			**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30		0	3.6	16.8	30				
60		0	3.6	16.8	60				
90		0	3.5	16.9	90				

Hole :	MW01	**Flow :**		**l/hr 0.1**	**Hole :**		**Flow :**			**l/hr**
Response Zone :			**to**		**Response Zone :**			**to**		
MP State :		**R of C :**			**MP State :**		**R of C :**			
SWL :		**MP Depth :**		**m**	**SWL :**		**MP Depth :**			**m**
Sample :		**BG O_2 :**		**% v/v**	**Sample :**		**BG O_2 :**			**% v/v**

Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Time (secs)	LEL (%)	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)
30					30				
60					60				
90					90				

NOTES :

1 (MW5) H2S, CO: 30 sec 1,1. 60 sec 1,1. 90 sec 1,1
2 (MW1) H2S, CO: 30 sec 1,8. 60 sec 1,8. 90 sec 1,8
3
4
5
6

Operator : Sophie Macalpine/ Mia Schaeper

Sydney, New South Wales
December 2022 Daily Weather Observations

Most observations from Observatory Hill, but some from Fort Denison and Sydney Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Th	17.9	22.5	0	3.8	0.4	ESE	30	10:36	19.9	64	7	ESE	15	1017.0	21.7	55	7	ESE	20	1015.1
2	Fr	16.5	25.3	0	10.4	7.5	ESE	33	11:55	20.0	60	7	SSE	19	1017.4	24.7	50	6	SE	19	1016.6
3	Sa	15.2	24.4	0	8.0	12.8	E	31	17:24	19.5	74	3	SSW	9	1019.3	23.8	52	1	E	22	1017.1
4	Su	15.4	26.0	0	6.8	12.7	ENE	43	15:51	19.9	74	5	W	2	1017.4	24.9	45	1	ENE	26	1014.1
5	Mo	16.4	27.9	0	10.7	10.3	N	41	15:36	21.8	73	2	E	15	1009.0	26.3	59	3	ENE	20	1003.3
6	Tu	17.4	24.2	6.6	9.0	11.9	ESE	44	13:21	20.7	73	3	S	15	1007.5	22.8	52	3	SE	22	1006.7
7	We	15.9	25.4	0	8.2	5.1	NNW	39	17:01	21.0	72	4	N	7	1006.2	24.0	67	7	ESE	9	1002.8
8	Th	18.4	22.9	0	4.4	12.2	SW	46	06:37	21.0	34	1	WSW	19	1006.1	20.9	42	1	SE	24	1006.7
9	Fr	14.9	22.1	0	11.2	8.2	ESE	41	11:40	17.1	54	7	S	13	1014.3	21.0	46	1	SE	24	1013.6
10	Sa	15.2	24.4	0	12.0	9.9	SSE	37	00:52	19.0	59	6	SW	6	1019.1	22.9	48	2	E	17	1016.6
11	Su	14.8	28.6	0.2	5.6	12.4	NE	44	18:49	20.2	70	1	NNE	9	1013.2	25.7	56	1	NE	19	1007.9
12	Mo	20.2	29.6	0	15.0	7.2	W	94	09:50	28.5	47	6	NNW	35	998.5	26.0	44	6	WNW	31	998.3
13	Tu	14.0	25.7	22.6	9.2	12.7	NNE	43	19:13	19.2	40	0	WNW	13	1010.2	24.8	40	1	ENE	30	1006.3
14	We	15.0	25.3	0	11.4	12.3	W	59	15:21	19.4	46	3	WSW	26	1008.1	24.7	21	2	W	35	1006.0
15	Th	13.4	24.0	0	8.8	12.7	SSE	57	18:11	17.8	42	2	WSW	20	1008.7	23.2	38	3	SSE	28	1008.0
16	Fr	12.5	21.8	0.6	9.2	8.3	S	63	17:15	15.4	51	7	SW	17	1014.6	20.4	46	2	SSE	37	1014.4
17	Sa	14.3	20.6	0.2	8.0	2.9	S	54	16:50	17.6	65	7	SSW	22	1020.0	19.9	56	7	S	30	1020.4
18	Su	13.4	20.8	35.0	5.4	4.9	SSE	56	16:14	14.3	99	8	SW	15	1022.7	18.8	71	6	S	22	1021.7
19	Mo	14.2	21.4	5.8	6.0	6.8	SW	56	12:41	17.9	62	7	SSW	22	1024.2	19.3	54	6	S	24	1023.5
20	Tu	13.6	23.4	0	7.0	9.1	SE	43	14:19	17.5	65	7	SSW	19	1022.7	21.6	46	1	SE	20	1020.5
21	We	14.5	23.5	0	6.8	10.2	SE	33	11:07	18.4	66	4	SSW	9	1019.5	22.3	50	6	ESE	20	1016.7
22	Th	14.8	23.5	0	9.3	2.3	NE	33	10:15	20.2	63	7	NE	15	1016.3	21.5	60	7	ENE	19	1014.1
23	Fr	16.6	28.9	0.8	2.4	12.2	ESE	30	11:54	20.5	83	4	W	9	1011.8	25.2	68	3	E	20	1009.1
24	Sa	18.5	29.7	0	7.0	13.4	NE	39	15:05	22.4	75	1	NW	7	1010.1	28.7	59	2	NE	11	1008.2
25	Su	19.6	27.4	0	10.2	8.2	SSE	31	01:00	21.5	83	8	SSE	7	1016.2	26.6	66	1	E	19	1015.6
26	Mo	19.3	28.4	0	7.8	10.7	NE	48	18:01	21.1	96	4	SE	4	1021.5	27.4	72	1	ENE	24	1019.9
27	Tu	18.9	28.1	0	10.0	13.2	ENE	35	17:37	22.5	85	2	ESE	9	1023.6	27.9	57	1	E	20	1020.9
28	We	19.6	27.8	0	9.8	13.0	NE	48	17:17	22.3	75	1	NE	11	1017.1	27.4	58	1	ENE	26	1012.3
29	Th	19.7	22.8	0	10.4	0.0	SSE	44	04:32	20.2	84	8	S	24	1016.2	22.4	73	8	SSW	13	1017.1
30	Fr	18.8	24.9	5.4	2.2	0.3	SSW	31	04:33	21.4	99	8	NE	7	1018.9	24.4	72	7	E	20	1017.4
31	Sa	18.1	25.8	1.0	4.6	3.6				22.6	81	6	SE	2	1016.9	24.2	76	7	ENE	22	1014.9
Statistics for December 2022																					
	Mean	16.4	25.1		8.1	8.6				20.0	68	4		13	1015.0	23.7	54	3		22	1013.1
	Lowest	12.5	20.6		2.2	0.0				14.3	34	0	#	2	998.5	18.8	21	1	ESE	9	998.3
	Highest	20.2	29.7	35.0	15.0	13.4	W	94		28.5	99	8	NNW	35	1024.2	28.7	76	8	SSE	37	1023.5
	Total			78.2	250.6	267.4															

Temperature, humidity and rainfall observations are from Sydney (Observatory Hill) {station 066214}. Pressure, cloud, evaporation and sunshine observations are from Sydney Airport AMO {station 066037}. Wind observations are from Fort Denison {station 066022}

Sydney Airport is about 10 km to the south of Observatory Hill.

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Sydney, New South Wales
March 2023 Daily Weather Observations

Most observations from Observatory Hill, but some from Fort Denison and Sydney Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	We	21.5	28.1	0	4.8	9.8	SSW	65	14:12	22.7	89	7	W	15	1006.2	26.9	60	5	SSW	35	1007.2
2	Th	19.4	27.1	0	10.0	9.3	E	28	16:10	20.3	94	6	NNW	6	1013.6	26.0	67	3	E	15	1011.7
3	Fr	19.3	25.2	2.2	3.2	1.3	SSW	37	12:00	21.0	94	7	SSE	4	1016.2	22.5	90	8	S	24	1016.1
4	Sa	19.5	28.1	20.0	2.4	6.7	E	26	17:31	20.7	99	5	W	11	1017.5	25.6	62	7	E	13	1015.6
5	Su	18.3	28.1	0	6.4	11.1	NE	50	17:45	19.8	91	1	WNW	9	1013.6	27.8	62	1	ENE	24	1008.8
6	Mo	19.7	37.9	0	8.0	11.0	NNW	57	11:52	23.8	72	1	ENE	4	1004.5	36.8	28	3	NNW	28	1000.3
7	Tu	22.3	34.0	0	12.0	9.3	ENE	33	15:37	24.2	70	7	WNW	11	1006.6	28.4	52	1	E	22	1003.7
8	We	18.8	30.0	0	10.2	10.3	E	31	14:01	20.1	58	1	W	11	1006.3	27.2	41	1	E	24	1002.8
9	Th	16.7	28.4	0	7.0	11.5	SE	33	14:40	18.7	61	1	W	15	1010.7	26.8	45	1	ESE	22	1009.0
10	Fr	16.6	27.4	0	8.4	9.2	NE	46	19:44	18.7	83	1	WNW	15	1017.0	26.8	59	5	ENE	24	1014.6
11	Sa	18.7	28.6	0	6.4	10.6	NE	41	17:31	20.4	88	1	W	13	1014.0	28.0	66	1	ENE	17	1009.8
12	Su	20.4	27.0	0	7.0	6.0	SSW	50	11:28	23.1	81	6	SSW	22	1010.5	25.6	70	6	SSE	26	1010.4
13	Mo	21.4	24.9	0	8.6	3.8	ESE	43	09:16	22.4	71	6	ESE	28	1016.3	23.2	66	7	ESE	19	1016.7
14	Tu	20.4	23.8	0.6	2.8	0.7	ESE	33	03:02	21.7	91	7	E	13	1017.8	21.6	89	7	NE	7	1016.2
15	We	18.4	28.5	9.8	1.8	9.8	ENE	24	12:29	19.9	100	6	WNW	13	1014.0	26.5	70	2	E	19	1010.4
16	Th	18.9	36.2	0	5.0	10.5	W	37	16:02	20.1	99	3	WNW	11	1010.8	35.5	32	1	W	11	1005.9
17	Fr	20.0	31.6	0	10.0	9.1	SSE	41	11:56	24.1	48	0	W	13	1013.6	28.2	61	1	ESE	28	1014.9
18	Sa	20.7	29.1	0	6.8	10.5	NNE	41	18:09	22.7	92	5	NNE	4	1019.7	28.6	65	1	ENE	24	1016.7
19	Su	20.7	28.9	0	6.8	9.8	SSW	28	21:40	21.6	100	3	W	13	1018.0	28.4	70	1	ESE	19	1015.6
20	Mo	21.6	23.6	0	7.4	0.0	SSE	56	09:23	23.5	82	7	SSE	28	1023.1	22.5	71	8	SSE	31	1025.7
21	Tu	18.1	22.9	0.6	4.4	0.0	ESE	35	23:20	20.2	68	7	ESE	20	1029.3	22.4	60	7	ESE	15	1027.1
22	We	18.7	24.2	0.2	4.0	1.0	N	30	10:32	20.2	83	7	W	11	1023.1	23.4	72	7	NE	13	1020.2
23	Th	19.4	27.3	1.2	4.4	3.2	SSE	37	14:42	20.9	92	7	W	13	1017.7	25.4	71	7	S	13	1016.1
24	Fr	17.5	25.5	4.6	0.8	7.4	SSE	33	11:26	18.9	93	3	W	19	1016.9	24.9	73	5	SE	17	1016.4
25	Sa	18.9	24.6	0	6.2	1.2	E	37	18:16	22.2	72	7	ESE	20	1018.5	23.5	64	7	ESE	19	1017.3
26	Su	19.1	26.1	1.8	2.8	2.1	N	31	20:12	20.1	89	7	WNW	7	1018.0	24.8	69	7	ENE	20	1015.4
27	Mo	19.4	24.6	8.2	4.4	0.4	W	28	12:53	19.6	98	8	N	13	1013.3	23.4	86	7	W	19	1010.4
28	Tu	19.5	24.8	0.6	2.8	0.4	W	24	06:18	21.4	90	7	W	11	1013.8	23.2	81	8	WNW	11	1013.3
29	We	19.6	27.1	4.2	1.4	4.7	W	54	16:48	20.7	88	8	NNW	31	1007.1	24.3	69	6	NNW	26	1000.6
30	Th	15.6	25.7	0	5.8	10.3	W	41	12:49	17.2	69	1	W	24	1006.5	24.1	34	7	SW	24	1005.8
31	Fr	14.3	25.7	0	5.8	10.0	W	39	09:02	15.5	63	1	W	20	1011.6	25.0	38	1	ESE	15	1009.4
Statistics for March 2023																					
	Mean	19.1	27.6		5.7	6.5				20.9	82	4		14	1014.4	26.0	62	4		20	1012.4
	Lowest	14.3	22.9		0.8	0.0				15.5	48	0	#	4	1004.5	21.6	28	1	NE	7	1000.3
	Highest	22.3	37.9	20.0	12.0	11.5	SSW	65		24.2	100	8	NNW	31	1029.3	36.8	90	8	SSW	35	1027.1
	Total			54.0	177.8	201.0															

Temperature, humidity and rainfall observations are from Sydney (Observatory Hill) {station 066214}. Pressure, cloud, evaporation and sunshine observations are from Sydney Airport AMO {station 066037}. Wind observations are from Fort Denison {station 066022}

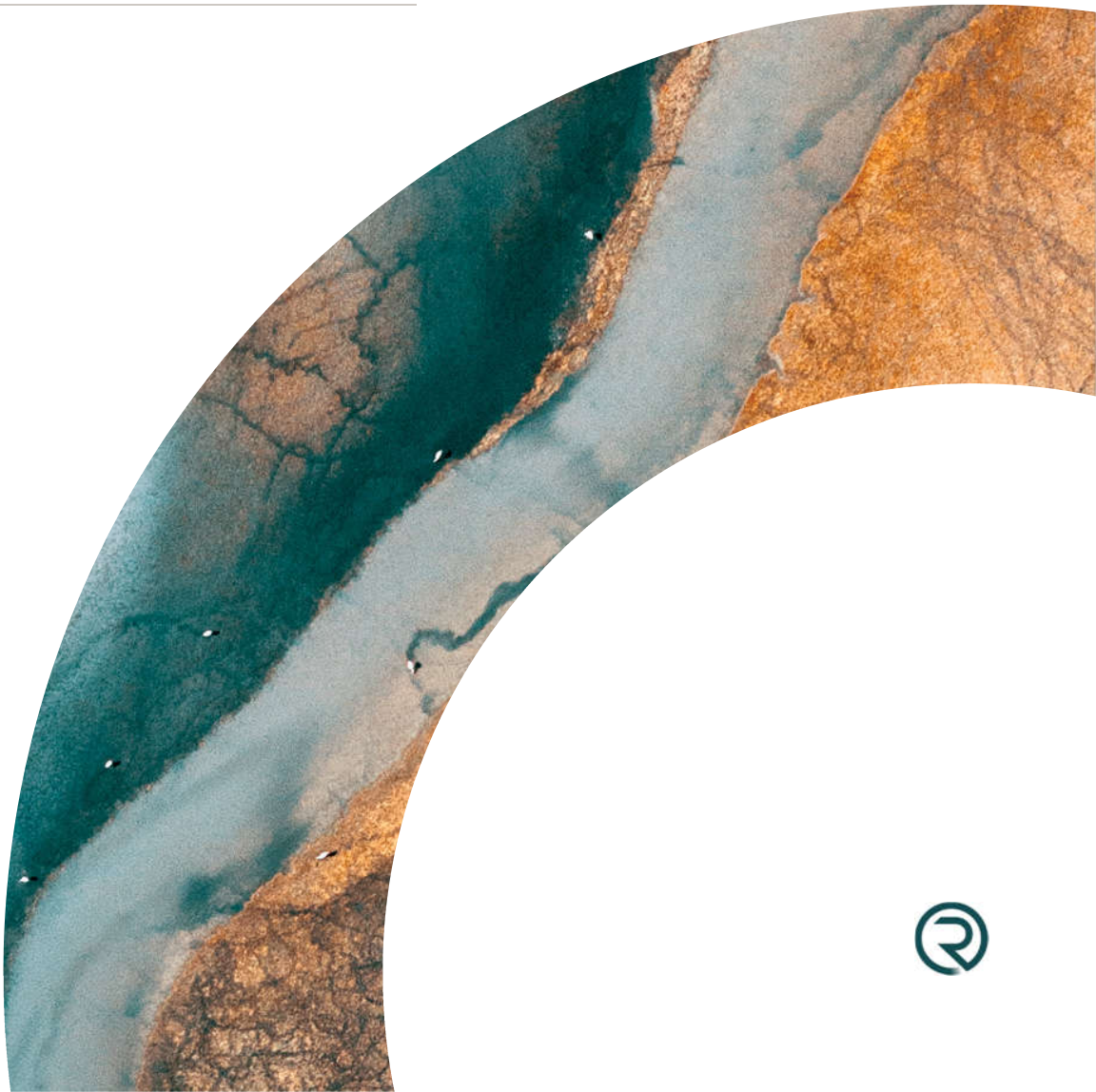
Sydney Airport is about 10 km to the south of Observatory Hill.

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H

Laboratory Analytical Reports



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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Dean Stafford

Sample Login Details

Your reference	22038
Envirolab Reference	312405
Date Sample Received	06/12/2022
Date Instructions Received	07/12/2022
Date Results Expected to be Reported	14/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	43 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
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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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH03-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓					
BH03-0.5	✓	✓	✓	✓	✓	✓	✓							
BH03-1														✓
BH03-2														✓
BH03-3														✓
BH04-0.15	✓	✓	✓	✓	✓	✓	✓	✓						
BH04-0.5	✓	✓	✓	✓	✓	✓	✓							
BH04-1							✓			✓	✓	✓		
BH04-2														✓
BH04-3														✓
BH05-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH05-0.5														✓
BH05-1	✓	✓	✓	✓	✓	✓	✓							
BH05-2														✓
BH05-3													✓	
BH05-4													✓	
BH05-5														✓
BH05-6														✓
BH06-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓					
BH06-0.5	✓	✓	✓	✓	✓	✓	✓							
BH06-1														✓
BH06-2														✓
BH07-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH07-0.5														✓
BH07-1														✓
BH07-2														✓
BH07-3	✓	✓	✓	✓	✓	✓	✓							
BH07-4														✓
BH07-5														✓
BH07-6														✓
BH08-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH08-0.5	✓	✓	✓	✓	✓	✓	✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH08-1														✓
BH08-2														✓
BH08-3														✓
BH34-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH34-0.5	✓	✓	✓	✓	✓	✓	✓	✓						
BH34-1														✓
BH34-1.5														✓
DUP01	✓	✓	✓	✓	✓	✓	✓							
Trip Blank 1	✓													
BH06-3.0														✓
BH07-7.0														✓

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.

CHAIN OF CUSTODY FORM - Client

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Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
T 08 8367 1201 | E darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No.:
Address: 1A / 28-33 Waratah Street Kirrawee NSW	Date results required: Standard Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 8567 Mob: 0434 557 155 0408 928 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com, deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au, jackpalma@reditus.com.au	

Envirolab Sample ID	Client Sample ID or Information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 8	PFAS (28 analytes)	VOC	NEPM EIL Characterisation	Chromium Reducible Suite	Analysis								Comments
1	BH03	0.15	5/12/2022	Soil		X		X												
2	BH03	0.5	5/12/2022	Soil			X													
3	BH03	1	5/12/2022	Soil	X															
4	BH03	2	5/12/2022	Soil	X															
5	BH03	3	5/12/2022	Soil	X															
6	BH04	0.15	5/12/2022	Soil		X														
7	BH04	0.5	5/12/2022	Soil			X													
8	BH04	1	5/12/2022	Soil						X										
9	BH04	2	5/12/2022	Soil	X															
10	BH04	3	5/12/2022	Soil	X															
11	BH05	0.1	5/12/2022	Soil		X				4										
12	BH05	0.5	5/12/2022	Soil	X															
13	BH05	1	5/12/2022	Soil			X													
14	BH05	2	5/12/2022	Soil	X															
15	BH05	3	5/12/2022	Soil							X									
16	BH05	4	5/12/2022	Soil							X									
17	BH05	5	5/12/2022	Soil	X															
18	BH05	6	5/12/2022	Soil	X															
NR	BH05	7	5/12/2022	Soil	X															
19	BH06	0.1	5/12/2022	Soil		X		X												
20	BH06	0.5	5/12/2022	Soil			X													
21	BH06	1	5/12/2022	Soil	X															
22	BH06	2	5/12/2022	Soil	X															
23	BH07	0.1	5/12/2022	Soil		X														
24	BH07	0.5	5/12/2022	Soil	X															
25	BH07	1	5/12/2022	Soil	X															
26	BH07	2	5/12/2022	Soil	1X															
27	BH07	3	5/12/2022	Soil			X													
28	BH07	4	5/12/2022	Soil	X															
29	BH07	5	5/12/2022	Soil	X															
30	BH07	6	5/12/2022	Soil	X															
31	BH08	0.1	5/12/2022	Soil		X														
32	BH08	0.5	5/12/2022	Soil			X													
33	BH08	1	5/12/2022	Soil	X															
34	BH08	2	5/12/2022	Soil	X															
35	BH08	3	5/12/2022	Soil	X															
36	BH34	0.1	5/12/2022	Soil		X														
37	BH34	0.5	5/12/2022	Soil		X														
38	BH34	1	5/12/2022	Soil	X															
39	BH34	1.5	5/12/2022	Soil	X															
40	DUP01	-	5/12/2022	Soil			X													
41	TRIP01	-	5/12/2022	Soil			X													Please forward to ALS
42	Trip Blank 1	-	5/12/2022	Soil								X								

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company): ELS-LP	*Lab Use Only*
Print Name: Jack Palma	Print Name: [illegible]	Job number: 87270S-
Date & Time: 6/12/2022	Date & Time: 6/12/22 1230	Temperature: 10°C
Signature:	Signature:	Cooling: ice / ice pack / None
		Security seal: Intact / Broken / None
		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD

42 BH06 3.0
43. BH07 7.0

COC 7/12/22
1000

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CERTIFICATE OF ANALYSIS 312405

Client Details

Client	Reditus Consulting
Attention	Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	43 Soil
Date samples received	06/12/2022
Date completed instructions received	07/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	14/12/2022
Date of Issue	14/12/2022

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen
Authorised by Asbestos Approved Signatory: Nyovan Moonean

Results Approved By
Alexander Mitchell Maclean, Senior Chemist
Diego Bigolin, Inorganics Supervisor
Hannah Nguyen, Metals Supervisor
Josh Williams, Organics and LC Supervisor
Nick Sarlamis, Assistant Operation Manager
Nyovan Moonean, Asbestos Approved Identifier/Counter
Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	76	84	89	82	90

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	95	76	91	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	75	96	95	85

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		312405-41
Your Reference	UNITS	Trip Blank 1
Depth		-
Type of sample		Soil
Date Sampled		05/12/2022
Date extracted	-	09/12/2022
Date analysed	-	09/12/2022
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	90

svTRH (C10-C40) in Soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	10/12/2022	10/12/2022	10/12/2022	10/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	160
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	160
Surrogate o-Terphenyl	%	95	87	86	84	91

svTRH (C10-C40) in Soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	10/12/2022	10/12/2022	10/12/2022	10/12/2022	10/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	170	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	180	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	340	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	300	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	300	<50
Surrogate o-Terphenyl	%	87	85	87	95	86

svTRH (C10-C40) in Soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	10/12/2022	10/12/2022	10/12/2022	10/12/2022	10/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	130	<100	130	<100	170
TRH C_{29} - C_{36}	mg/kg	130	<100	<100	<100	160
Total +ve TRH (C10-C36)	mg/kg	260	<50	130	<50	330
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	230	<100	200	<100	290
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	230	<50	200	<50	290
Surrogate o-Terphenyl	%	98	83	86	84	91

PAHs in Soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<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
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	104	102	102	107	100

PAHs in Soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.6	<0.2	0.4	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.2	<0.05	0.09	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	1.5	<0.05	0.5	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	105	102	101	107	100

PAHs in Soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	1.2	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.4	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	3.6	<0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	4.6	<0.1	<0.1	<0.1	0.1
Benzo(a)anthracene	mg/kg	3.3	<0.1	<0.1	<0.1	0.2
Chrysene	mg/kg	2.0	<0.1	<0.1	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	8.9	<0.2	0.2	<0.2	0.8
Benzo(a)pyrene	mg/kg	2.9	<0.05	<0.05	<0.05	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	1.7	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	1.7	<0.1	<0.1	<0.1	0.1
Total +ve PAH's	mg/kg	31	<0.05	0.2	<0.05	1.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	4.6	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	4.6	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	4.6	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	108	105	101	102	104

Organochlorine Pesticides in soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	89	93	89

Organochlorine Pesticides in soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	89	86	94	91

Organochlorine Pesticides in soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	92	88	91	91

Organophosphorus Pesticides in Soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	89	93	89

Organophosphorus Pesticides in Soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	89	86	94	91

Organophosphorus Pesticides in Soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	92	88	91	91

PCBs in Soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-11
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH05
Depth		0.15	0.5	0.15	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	89	93	89

PCBs in Soil						
Our Reference		312405-13	312405-19	312405-20	312405-23	312405-27
Your Reference	UNITS	BH05	BH06	BH06	BH07	BH07
Depth		1	0.1	0.5	0.1	3
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	89	86	94	91

PCBs in Soil						
Our Reference		312405-31	312405-32	312405-36	312405-37	312405-40
Your Reference	UNITS	BH08	BH08	BH34	BH34	DUP01
Depth		0.1	0.5	0.1	0.5	-
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	92	88	91	91

Acid Extractable metals in soil						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-8
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH04
Depth		0.15	0.5	0.15	0.5	1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Arsenic	mg/kg	5	<4	<4	<4	[NA]
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	[NA]
Chromium	mg/kg	20	15	13	3	[NA]
Copper	mg/kg	28	21	21	10	[NA]
Lead	mg/kg	25	25	51	15	[NA]
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	[NA]
Nickel	mg/kg	3	2	1	<1	[NA]
Zinc	mg/kg	10	6	6	4	[NA]
Iron	mg/kg	[NA]	[NA]	[NA]	[NA]	28,000

Acid Extractable metals in soil						
Our Reference		312405-11	312405-13	312405-19	312405-20	312405-23
Your Reference	UNITS	BH05	BH05	BH06	BH06	BH07
Depth		0.1	1	0.1	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Arsenic	mg/kg	<4	<4	7	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	13	20	13
Copper	mg/kg	30	13	28	26	26
Lead	mg/kg	12	18	90	25	25
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	43	1	8	3	15
Zinc	mg/kg	50	4	29	9	100

Acid Extractable metals in soil						
Our Reference		312405-27	312405-31	312405-32	312405-36	312405-37
Your Reference	UNITS	BH07	BH08	BH08	BH34	BH34
Depth		3	0.1	0.5	0.1	0.5
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Arsenic	mg/kg	<4	<4	5	4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	8	12	21	20
Copper	mg/kg	21	23	29	36	15
Lead	mg/kg	16	36	16	25	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	9	2	33	8
Zinc	mg/kg	13	39	14	270	23

Acid Extractable metals in soil			
Our Reference		312405-40	312405-44
Your Reference	UNITS	DUP01	BH06 - [TRIPLICATE]
Depth		-	0.5
Type of sample		Soil	Soil
Date Sampled		05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022
Arsenic	mg/kg	6	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	18	14
Copper	mg/kg	25	16
Lead	mg/kg	27	17
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	13	2
Zinc	mg/kg	110	7

Moisture						
Our Reference		312405-1	312405-2	312405-6	312405-7	312405-8
Your Reference	UNITS	BH03	BH03	BH04	BH04	BH04
Depth		0.15	0.5	0.15	0.5	1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	20	20	18	12	9.7

Moisture						
Our Reference		312405-11	312405-13	312405-19	312405-20	312405-23
Your Reference	UNITS	BH05	BH05	BH06	BH06	BH07
Depth		0.1	1	0.1	0.5	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	13	22	9.3	23	19

Moisture						
Our Reference		312405-27	312405-31	312405-32	312405-36	312405-37
Your Reference	UNITS	BH07	BH08	BH08	BH34	BH34
Depth		3	0.1	0.5	0.1	0.5
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	15	12	15	7.5	17

Moisture		
Our Reference		312405-40
Your Reference	UNITS	DUP01
Depth		-
Type of sample		Soil
Date Sampled		05/12/2022
Date prepared	-	09/12/2022
Date analysed	-	12/12/2022
Moisture	%	20

Asbestos ID - soils						
Our Reference		312405-1	312405-6	312405-11	312405-19	312405-23
Your Reference	UNITS	BH03	BH04	BH05	BH06	BH07
Depth		0.15	0.15	0.1	0.1	0.1
Type of sample		Soil	Soil	Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022	05/12/2022	05/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Sample mass tested	g	Approx. 55g	Approx. 55g	Approx. 50g	Approx. 65g	Approx. 40g
Sample Description	-	Pink coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Black fine-grained soil and rocks	Black coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils				
Our Reference		312405-31	312405-36	312405-37
Your Reference	UNITS	BH08	BH34	BH34
Depth		0.1	0.1	0.5
Type of sample		Soil	Soil	Soil
Date Sampled		05/12/2022	05/12/2022	05/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022
Sample mass tested	g	Approx. 40g	Approx. 60g	Approx. 25g
Sample Description	-	Grey coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

PFAS in Soils Extended			
Our Reference		312405-1	312405-19
Your Reference	UNITS	BH03	BH06
Depth		0.15	0.1
Type of sample		Soil	Soil
Date Sampled		05/12/2022	05/12/2022
Date prepared	-	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1	0.9
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	0.1
Perfluoroheptanoic acid	µg/kg	<0.1	0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.3
Perfluorononanoic acid	µg/kg	<0.1	0.2
Perfluorodecanoic acid	µg/kg	<0.5	1
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	96	96
Surrogate $^{13}C_2$ *PFOA*	%	101	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	78	94
Extracted ISTD $^{18}O_2$ *PFHxS*	%	72	91
Extracted ISTD $^{13}C_4$ *PFOS*	%	78	95

PFAS in Soils Extended			
Our Reference		312405-1	312405-19
Your Reference	UNITS	BH03	BH06
Depth		0.15	0.1
Type of sample		Soil	Soil
Date Sampled		05/12/2022	05/12/2022
Extracted ISTD $^{13}C_4$ *PFBA*	%	66	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%	62	92
Extracted ISTD $^{13}C_2$ *PFHxA*	%	58	87
Extracted ISTD $^{13}C_4$ *PFHpA*	%	65	102
Extracted ISTD $^{13}C_4$ *PFOA*	%	66	97
Extracted ISTD $^{13}C_5$ *PFNA*	%	69	100
Extracted ISTD $^{13}C_2$ *PFDA*	%	65	98
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	71	110
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	72	103
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	85	113
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	64	106
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	68	122
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	65	139
Extracted ISTD $^{13}C_8$ *FOSA*	%	103	98
Extracted ISTD d_3 *N MeFOSA*	%	94	100
Extracted ISTD d_5 *N EtFOSA*	%	98	106
Extracted ISTD d_7 *N MeFOSE*	%	97	94
Extracted ISTD d_9 *N EtFOSE*	%	89	90
Extracted ISTD d_3 *N MeFOSAA*	%	49	120
Extracted ISTD d_5 *N EtFOSAA*	%	56	124
Total Positive PFHxS & PFOS	µg/kg	0.1	0.9
Total Positive PFOS & PFOA	µg/kg	<0.1	1.2
Total Positive PFAS	µg/kg	0.1	2.5

CEC		
Our Reference		312405-8
Your Reference	UNITS	BH04
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Date prepared	-	14/12/2022
Date analysed	-	14/12/2022
Exchangeable Ca	meq/100g	0.1
Exchangeable K	meq/100g	0.2
Exchangeable Mg	meq/100g	2.3
Exchangeable Na	meq/100g	1.1
Cation Exchange Capacity	meq/100g	3.8

Clay 50-120g		
Our Reference		312405-8
Your Reference	UNITS	BH04
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Date prepared	-	08/12/2022
Date analysed	-	09/12/2022
Clay in soils <2µm	% (w/w)	27

Misc Inorg - Soil		
Our Reference		312405-8
Your Reference	UNITS	BH04
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Date prepared	-	09/12/2022
Date analysed	-	09/12/2022
Ammonia as N in soil	mg/kg	2.4
Total Organic Carbon (Walkley Black)	mg/kg	5,000
pH 1:5 soil:$CaCl_2$	pH Units	3.3

Chromium Suite			
Our Reference		312405-15	312405-16
Your Reference	UNITS	BH05	BH05
Depth		3	4
Type of sample		Soil	Soil
Date Sampled		05/12/2022	05/12/2022
Date prepared	-	14/12/2022	14/12/2022
Date analysed	-	14/12/2022	14/12/2022
pH $_{kcl}$	pH units	4.3	4.6
s-TAA pH 6.5	%w/w S	0.07	0.03
TAA pH 6.5	moles H^+ /t	42	16
Chromium Reducible Sulfur	%w/w	0.02	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	15	<3
S_{HCl}	%w/w S	0.012	[NT]
S_{KCl}	%w/w S	0.011	[NT]
S_{NAS}	%w/w S	<0.005	[NT]
ANC_{BT}	% $CaCO_3$	[NT]	[NT]
s-ANC_{BT}	%w/w S	[NT]	[NT]
s-Net Acidity	%w/w S	0.093	0.027
a-Net Acidity	moles H^+ /t	58	17
Liming rate	kg $CaCO_3$ /t	4	1
a-Net Acidity without ANCE	moles H^+ /t	58	17
Liming rate without ANCE	kg $CaCO_3$ /t	4.3	1.3
s-Net Acidity without ANCE	%w/w S	0.093	0.027

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Net acidity including ANC has a safety factor of 1.5 applied. Neutralising value (NV) of 100% is assumed for liming rate. Based on National acid sulfate soils identification and laboratory methods manual June 2018. The recommendation that the SHCL concentration be multiplied by a factor of 2 to ensure retained acidity is not underestimated, has not been applied in the SHCL results reported.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
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.

Method ID	Methodology Summary
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.
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.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	105	102
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	105	102
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	106	100
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	107	104
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	102	100
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	105	102
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	102	101
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	93	1	76	89	16	93	84

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	20	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	20	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	20	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	20	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	20	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	20	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	20	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	20	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	20	76	88	15	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	10/12/2022		09/12/2022	10/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	103
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	91	98
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	123
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	103
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	91	98
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	123
Surrogate o-Terphenyl	%		Org-020	86	1	95	86	10	88	87

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	10/12/2022	10/12/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	20	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	20	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	20	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	20	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	20	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	20	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	20	87	86	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	78
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	77	75
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	78
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	84
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	90	90
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	95
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	79	60
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	<0.05	<0.05	0	118	108
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	99	1	104	100	4	94	94

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	20	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	20	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	20	101	108	7	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	70
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	86	80
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	77	77
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	81	75
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	76
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	98	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	81
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	72	64
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	82	77
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	66	74
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	91	88	3	85	81

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	20	86	94	9	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	81	67
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	71	67
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	63	73
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	71	73
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	80
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	66
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	108	90
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	91	88	3	85	81

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	20	86	94	9	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
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	110	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	94	1	91	88	3	85	81

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	20	86	94	9	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-2
Date prepared	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			12/12/2022	1	12/12/2022	12/12/2022		12/12/2022	12/12/2022
Arsenic	mg/kg	4	Metals-020	<4	1	5	6	18	97	77
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	108	87
Chromium	mg/kg	1	Metals-020	<1	1	20	24	18	114	86
Copper	mg/kg	1	Metals-020	<1	1	28	30	7	102	96
Lead	mg/kg	1	Metals-020	<1	1	25	31	21	117	88
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	81	90
Nickel	mg/kg	1	Metals-020	<1	1	3	4	29	109	85
Zinc	mg/kg	1	Metals-020	<1	1	10	14	33	113	86
Iron	mg/kg	10	Metals-020	<10	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	20	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	20	12/12/2022	12/12/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	20	6	4	40	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	20	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	20	20	15	29	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	20	26	17	42	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	20	25	18	33	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	20	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	20	3	2	40	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	20	9	7	25	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-19
Date prepared	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	98	100
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	104	103
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	0.1	0.1	0	100	96
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	107	95
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	91
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	95	88
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	95	92
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	99	94
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	96
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	96
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	96
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	99
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	101	106
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	99	94
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	95	100
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	95	113
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	105	101
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	93	96
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	92
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	97	100
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	102	84
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	99	95
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	100	94
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	98	93
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	100	94
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	118	99
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	99	98
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	89	96
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	100	1	96	99	3	106	96
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	1	101	98	3	102	102

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-19
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	92	1	78	84	7	96	92
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	87	1	72	78	8	87	88
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	1	78	85	9	90	93
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	100	1	66	74	11	100	93
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	97	1	62	71	14	94	91
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	90	1	58	68	16	89	89
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	96	1	65	74	13	97	101
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	93	1	66	75	13	92	96
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	98	1	69	78	12	97	101
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	97	1	65	73	12	94	94
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	98	1	71	79	11	100	105
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	99	1	72	84	15	103	90
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	107	1	85	94	10	111	107
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	98	1	64	74	14	99	116
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	101	1	68	74	8	100	134
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	97	1	65	77	17	105	135
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	105	1	103	103	0	104	92
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	98	1	94	96	2	101	99
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	107	1	98	101	3	105	104
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	98	1	97	99	2	99	87

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312405-19
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	87	1	89	93	4	89	90
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	96	1	49	47	4	99	107
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	107	1	56	55	2	106	119

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Date analysed	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			09/12/2022	[NT]	[NT]	[NT]	[NT]	09/12/2022	[NT]
Date analysed	-			09/12/2022	[NT]	[NT]	[NT]	[NT]	09/12/2022	[NT]
Ammonia as N in soil	mg/kg	0.5	Inorg-057	<0.5	[NT]	[NT]	[NT]	[NT]	105	[NT]
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	[NT]	[NT]	[NT]	[NT]	104	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			14/12/2022	16	14/12/2022	14/12/2022		14/12/2022	[NT]
Date analysed	-			14/12/2022	16	14/12/2022	14/12/2022		14/12/2022	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	16	4.6	4.6	0	100	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	16	0.03	0.03	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	16	16	16	0	79	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	16	<0.005	<0.005	0	118	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	16	<3	<3	0	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	16	[NT]	[NT]		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	16	[NT]	[NT]		[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	16	[NT]	[NT]		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	16	[NT]	[NT]		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	16	[NT]	[NT]		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	16	0.027	0.029	7	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	16	17	18	6	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	16	1	1	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	16	17	18	6	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	16	1.3	1.4	7	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	16	0.027	0.029	7	[NT]	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Sample 312405-37 was sub-sampled from jar provided by the client.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 312405-20 for Cu. Therefore a triplicate result has been issued as laboratory sample number 312405-44.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312405-A
Date Sample Received	06/12/2022
Date Instructions Received	13/12/2022
Date Results Expected to be Reported	20/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
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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12 Ashley St Chatswood NSW 2067
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customerservice@envirolab.com.au
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Sample ID	VOCs in soil	On Hold
BH03-0.15		✓
BH03-0.5		✓
BH03-1		✓
BH03-2		✓
BH03-3		✓
BH04-0.15		✓
BH04-0.5		✓
BH04-1		✓
BH04-2		✓
BH04-3		✓
BH05-0.1		✓
BH05-0.5		✓
BH05-1		✓
BH05-2		✓
BH05-3		✓
BH05-4		✓
BH05-5		✓
BH05-6		✓
BH06-0.1		✓
BH06-0.5		✓
BH06-1		✓
BH06-2		✓
BH07-0.1		✓
BH07-0.5		✓
BH07-1	✓	
BH07-2		✓
BH07-3		✓
BH07-4		✓
BH07-5		✓
BH07-6		✓
BH08-0.1		✓
BH08-0.5		✓

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Sample ID	VOCs in soil	On Hold
BH08-1		✓
BH08-2		✓
BH08-3		✓
BH34-0.1		✓
BH34-0.5		✓
BH34-1		✓
BH34-1.5		✓
DUP01		✓
Trip Blank 1		✓
BH06-3.0		✓
BH07-7.0		✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 13 December 2022 12:55 PM
To: Samplereceipt; Login
Cc: Dean Stafford
Subject: 22038 - Additional Analysis

Ref: 312405-A
TAT: Standard.
Due: 20/12/2022
MT.

Categories: Additional

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please schedule the following analysis for the project 22038:

- VOC
  - BH07 - 1.0 312405-25
  - BH09 - 0.5
  - BH15 - 3.0
  - BH38 - 0.4
  - BH40 - 0.25
  - BH44 - 0.25
  - BH45 - 0.2
- Combo 6a
  - SS01

Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
+61 408 988 954

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CERTIFICATE OF ANALYSIS 312405-A

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	06/12/2022
Date completed instructions received	13/12/2022

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

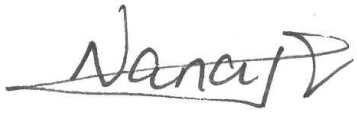
Date results requested by	20/12/2022
Date of Issue	20/12/2022

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Results Approved By
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil		
Our Reference		312405-A-25
Your Reference	UNITS	BH07
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Date extracted	-	14/12/2022
Date analysed	-	19/12/2022
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1

VOCs in soil		
Our Reference		312405-A-25
Your Reference	UNITS	BH07
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	106
Surrogate aaa-Trifluorotoluene	%	111
Surrogate Toluene-d_8	%	102
Surrogate 4-Bromofluorobenzene	%	93

Moisture		
Our Reference		312405-A-25
Your Reference	UNITS	BH07
Depth		1
Type of sample		Soil
Date Sampled		05/12/2022
Date prepared	-	14/12/2022
Date analysed	-	15/12/2022
Moisture	%	19

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Date analysed	-			19/12/2022	[NT]	[NT]	[NT]	[NT]	19/12/2022	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	[NT]
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	119	[NT]
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	[NT]
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	128	[NT]
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	120	[NT]
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	129	[NT]	[NT]	[NT]	[NT]	116	[NT]
Surrogate Toluene-d_8	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	95	[NT]	[NT]	[NT]	[NT]	98	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312405-B
Date Sample Received	06/12/2022
Date Instructions Received	20/12/2022
Date Results Expected to be Reported	05/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance: PAH

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

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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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
BH03-0.15																				✓
BH03-0.5																				✓
BH03-1																				✓
BH03-2																				✓
BH03-3																				✓
BH04-0.15																				✓
BH04-0.5																				✓
BH04-1																				✓
BH04-2																				✓
BH04-3																				✓
BH05-0.1	✓																		✓	
BH05-0.5																				✓
BH05-1																				✓
BH05-2																				✓
BH05-3																				✓
BH05-4																				✓
BH05-5																				✓
BH05-6																				✓
BH06-0.1																				✓
BH06-0.5																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
BH06-1																				✓
BH06-2																				✓
BH07-0.1																				✓
BH07-0.5																				✓
BH07-1																				✓
BH07-2																				✓
BH07-3																				✓
BH07-4																				✓
BH07-5																				✓
BH07-6																				✓
BH08-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH08-0.5																				✓
BH08-1																				✓
BH08-2																				✓
BH08-3																				✓
BH34-0.1																				✓
BH34-0.5																				✓
BH34-1																				✓
BH34-1.5																				✓
DUP01																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
Trip Blank 1																				✓
BH06-3.0																				✓
BH07-7.0																				✓
BH06 - [TRIPLICATE]-0.5																				✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 20 December 2022 6:02 PM
To: Login; Samplereceipt
Cc: Dean Stafford
Subject: 22038 - Further analysis

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please have the following further analysis for samples from the project 22038 on standard TAT:

- TCLP - Benzo(a)pyrene
  - BH02 - 0.1
  - BH08 - 0.1 3124405-31
  - BH11 - 0.1
  - BH29 - 0.4
  - BH30 - 0.1
  - BH38 - 0.15
  - BH38 - 0.4
  - BH40 - 0.25
  - BH40 - 0.5
  - BH45 - 0.2
  - BH45 - 0.5
- TCLP - Lead
  - BH27 - 0.1
- TCLP - Nickel
  - BH05 - 0.1 3124405-11
  - BH14 - 0.5
  - BH32 - 0.1

Ref: 3124405-B.
TAT: Standard.
Due: 05/01/2023.
MT

Any questions please let me know
Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
+61 408 988 954

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CERTIFICATE OF ANALYSIS 312405-B

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	06/12/2022
Date completed instructions received	20/12/2022

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

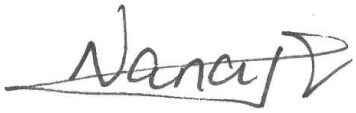
Date results requested by	05/01/2023
Date of Issue	04/01/2023

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Results Approved By
Hannah Nguyen, Metals Supervisor
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid			
Our Reference		312405-B-11	312405-B-31
Your Reference	UNITS	BH05	BH08
Depth		0.1	0.1
Type of sample		Soil	Soil
Date Sampled		05/12/2022	05/12/2022
pH of soil for fluid# determ.	pH units	8.5	11.0
pH of soil TCLP (after HCl)	pH units	1.8	4.7
Extraction fluid used		1	1
pH of final Leachate	pH units	5.1	7.1

PAHs in TCLP (USEPA 1311)		
Our Reference		312405-B-31
Your Reference	UNITS	BH08
Depth		0.1
Type of sample		Soil
Date Sampled		05/12/2022
Date extracted	-	22/12/2022
Date analysed	-	22/12/2022
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	75

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		312405-B-11
Your Reference	UNITS	BH05
Depth		0.1
Type of sample		Soil
Date Sampled		05/12/2022
Date extracted	-	22/12/2022
Date analysed	-	22/12/2022
Nickel	mg/L	<0.02

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	87	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	95	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Dean Stafford

Sample Login Details

Your reference	22038
Envirolab Reference	312491
Date Sample Received	07/12/2022
Date Instructions Received	07/12/2022
Date Results Expected to be Reported	14/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	65 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
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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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH09-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓					
BH09-0.5														✓
BH09-1														✓
BH09-2	✓	✓	✓	✓	✓	✓	✓						✓	
BH09-3														✓
BH09-4													✓	
BH09-5													✓	
BH09-6														✓
BH09-7														✓
BH13-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓					
BH13-0.5														✓
BH13-1														✓
BH13-1.6														✓
BH13-2.7	✓	✓	✓	✓	✓	✓	✓							
BH14-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH14-0.5	✓	✓	✓	✓	✓	✓	✓							
BH14-1														✓
BH14-2														✓
BH14-2.5														✓
BH16-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH16-0.5	✓	✓	✓	✓	✓	✓	✓							
BH16-1														✓
BH16-2														✓
BH16-3														✓
BH17-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH17-0.5	✓	✓	✓	✓	✓	✓	✓							
BH17-1														✓
BH17-2							✓			✓	✓	✓		
BH17-2.5														✓
BH24-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓					
BH24-0.5	✓	✓	✓	✓	✓	✓	✓							
BH24-1														✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH24-2														✓
BH24-3														✓
BH25-0.15	✓	✓	✓	✓	✓	✓	✓	✓						
BH25-0.5	✓	✓	✓	✓	✓	✓	✓							
BH25-1														✓
BH25-2														✓
BH25-3														✓
BH26-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH26-0.5	✓	✓	✓	✓	✓	✓	✓							
BH26-1														✓
BH26-2														✓
BH26-3														✓
BH27-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH27-0.5	✓	✓	✓	✓	✓	✓	✓							
BH27-1							✓			✓	✓	✓		
BH27-2														✓
BH30-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH30-0.3														✓
BH30-0.5														✓
BH30-1	✓	✓	✓	✓	✓	✓	✓							
BH30-2														✓
BH30-3														✓
BH33-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH33-0.5	✓	✓	✓	✓	✓	✓	✓							
BH33-1														✓
BH33-2														✓
BH33-3														✓
BH42-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH43-0.1	✓	✓	✓	✓	✓	✓	✓	✓						
BH43-0.3	✓	✓	✓	✓	✓	✓	✓							
DUP02	✓	✓	✓	✓	✓	✓	✓							
DUP03	✓	✓	✓	✓	✓	✓	✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH13-2.0														✓

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.

CHAIN OF CUSTODY FORM - Client

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National phone number 1300 424 344

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23 Research Drive, Croydon South, VIC 3136
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Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
T 08 8967 1201 | E darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (to report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No. :
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Date results required: Standard
	Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 188 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample Information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or Information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	NEPM EIL Characterisatio n	Chromium Reducible Suite	Analysis								Provide as much information about the sample as you can
1	BH09	0.1	6/12/2022	Soil		x		x												
2	BH09	0.5	6/12/2022	Soil	x															
3	BH09	1	6/12/2022	Soil	x															
4	BH09	2	6/12/2022	Soil			x				x									
5	BH09	3	6/12/2022	Soil	x															
6	BH09	4	6/12/2022	Soil							x									
7	BH09	5	6/12/2022	Soil							x									
8	BH09	6	6/12/2022	Soil	x															
9	BH09	7	6/12/2022	Soil	x															
10	BH13	0.1	6/12/2022	Soil		x		x												
11	BH13	0.5	6/12/2022	Soil	x															
12	BH13	1	6/12/2022	Soil	x															
13	BH13	1.8	6/12/2022	Soil	x															
14	BH13	2.7	6/12/2022	Soil			x													
15	BH14	0.1	6/12/2022	Soil		x														
16	BH14	0.5	6/12/2022	Soil			x													
17	BH14	1	6/12/2022	Soil	x															
18	BH14	2	6/12/2022	Soil	x															
19	BH14	2.5	6/12/2022	Soil	x															
20	BH16	0.1	6/12/2022	Soil		x														
21	BH16	0.5	6/12/2022	Soil			x													
22	BH16	1	6/12/2022	Soil	x															
23	BH16	2	6/12/2022	Soil	x															
24	BH16	3	6/12/2022	Soil	x															
25	BH17	0.1	6/12/2022	Soil		x														
26	BH17	0.5	6/12/2022	Soil			x													
27	BH17	1	6/12/2022	Soil	x															
28	BH17	2	6/12/2022	Soil						x										
29	BH17	2.5	6/12/2022	Soil	x															
30	BH24	0.1	6/12/2022	Soil		x		x												
31	BH24	0.5	6/12/2022	Soil			x													
32	BH24	1	6/12/2022	Soil	x															
33	BH24	2	6/12/2022	Soil	x															
34	BH24	3	6/12/2022	Soil	x															
35	BH25	0.1	6/12/2022	Soil		x														
36	BH25	0.5	6/12/2022	Soil			x													
37	BH25	1	6/12/2022	Soil	x															
38	BH25	2	6/12/2022	Soil	x															
39	BH25	3	6/12/2022	Soil	x															
40	BH26	0.1	6/12/2022	Soil		x														
41	BH26	0.5	6/12/2022	Soil			x													
42	BH26	1	6/12/2022	Soil	x															
43	BH26	2	6/12/2022	Soil	x															
44	BH26	3	6/12/2022	Soil	x															
45	BH27	0.1	6/12/2022	Soil		x														
46	BH27	0.5	6/12/2022	Soil			x													
47	BH27	1	6/12/2022	Soil						x										
48	BH27	2	6/12/2022	Soil	x															
49	BH30	0.1	6/12/2022	Soil		x														
50	BH30	0.3	6/12/2022	Soil	x															
51	BH30	0.5	6/12/2022	Soil	x															
52	BH30	1	6/12/2022	Soil			x													
53	BH30	2	6/12/2022	Soil	x															
54	BH30	3	6/12/2022	Soil	x															
55	BH33	0.1	6/12/2022	Soil		x														
56	BH33	0.5	6/12/2022	Soil			x													
57	BH33	1	6/12/2022	Soil	x															
58	BH33	2	6/12/2022	Soil	x															
59	BH33	3	6/12/2022	Soil	x															
60	BH42	0.1	6/12/2022	Soil		x														
61	BH43	0.1	6/12/2022	Soil		x														
62	BH43	0.3	6/12/2022	Soil			x													
63	DUP02	-	6/12/2022	Soil			x													
64	DUP03	-	6/12/2022	Soil			x													
—	TRIP02	-	6/12/2022	Soil			x													Please forward to ALS
—	TRIP03	-	6/12/2022	Soil			x													Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company): ES STD		*Lab Use Only*
Print Name: Jack Palma	Print Name: HTL	Job number: 312941	Cooling: Ice / Ice pack / None
Date & Time: 7/12/2022	Date & Time: 7/12/2022 10:50	Temperature: 19.0C	Security seal: Intact / Broken / None
Signature:	Signature: HTL	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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

Job No: 312941
Date Received: 7/12/2022
Time Received: 10:50
Received By: HTL
Temp: Cooled / Ambient
Cooling: Ice / Ice pack
Security: Intact / Broken / None

65 extra. BH13 2.0

COC 7/12/22

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CERTIFICATE OF ANALYSIS 312491

Client Details

Client	Reditus Consulting
Attention	Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	65 Soil
Date samples received	07/12/2022
Date completed instructions received	07/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	14/12/2022
Date of Issue	14/12/2022

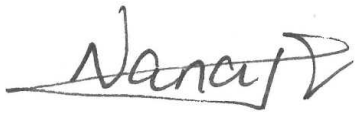
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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen
Authorised by Asbestos Approved Signatory: Nyovan Moonean

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Hannah Nguyen, Metals Supervisor
Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader
Nick Sarlamis, Assistant Operation Manager
Nyovan Moonean, Asbestos Approved Identifier/Counter
Phalak Inthakesone, Organics Development Manager, Sydney
Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	91	96	98	102

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	95	101	99	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	92	98	91	92	89

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	100	89	95	99	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	97	97	101	100	103

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		312491-63	312491-64
Your Reference	UNITS	DUP02	DUP03
Depth		-	-
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	08/12/2022	08/12/2022
Date analysed	-	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	94

svTRH (C10-C40) in Soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	970
TRH C_{29} - C_{36}	mg/kg	110	<100	<100	<100	1,100
Total +ve TRH (C10-C36)	mg/kg	110	<50	<50	<50	2,100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	53
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	53
TRH >C_{16} -C_{34}	mg/kg	170	<100	<100	<100	1,800
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	1,200
Total +ve TRH (>C10-C40)	mg/kg	170	<50	<50	<50	3,000
Surrogate o-Terphenyl	%	90	84	90	86	107

svTRH (C10-C40) in Soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	260	<100	140	<100
TRH C_{29} - C_{36}	mg/kg	<100	820	<100	190	<100
Total +ve TRH (C10-C36)	mg/kg	<50	1,100	<50	340	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	810	<100	290	<100
TRH >C_{34} -C_{40}	mg/kg	<100	1,100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	1,900	<50	290	<50
Surrogate o-Terphenyl	%	81	89	81	106	91

svTRH (C10-C40) in Soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	180	<100	<100	<100	110
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	180	<50	<50	<50	110
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	240	<100	<100	<100	150
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	240	<50	<50	<50	150
Surrogate o-Terphenyl	%	100	86	84	81	88

svTRH (C10-C40) in Soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	110	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	110	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	180	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	180	<50
Surrogate o-Terphenyl	%	81	81	87	96	84

svTRH (C10-C40) in Soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	120	130	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	120	130	<50
Surrogate o-Terphenyl	%	86	84	89	89	87

svTRH (C10-C40) in Soil			
Our Reference		312491-63	312491-64
Your Reference	UNITS	DUP02	DUP03
Depth		-	-
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	08/12/2022	08/12/2022
Date analysed	-	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	54
TRH C_{15} - C_{28}	mg/kg	<100	120
TRH C_{29} - C_{36}	mg/kg	<100	130
Total +ve TRH (C10-C36)	mg/kg	<50	300
TRH >C_{10} -C_{16}	mg/kg	<50	52
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	52
TRH >C_{16} -C_{34}	mg/kg	<100	210
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	260
Surrogate o-Terphenyl	%	82	90

PAHs in Soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.2	<0.1	1.6
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Fluoranthene	mg/kg	<0.1	<0.1	0.2	<0.1	1.7
Pyrene	mg/kg	0.2	<0.1	0.2	<0.1	1.6
Benzo(a)anthracene	mg/kg	0.1	<0.1	0.1	<0.1	1.1
Chrysene	mg/kg	0.1	<0.1	0.1	<0.1	0.7
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	1
Benzo(a)pyrene	mg/kg	0.07	<0.05	0.08	<0.05	0.60
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5
Total +ve PAH's	mg/kg	0.52	<0.05	1.0	<0.05	10
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.9
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.9
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	1
Surrogate p-Terphenyl-d14	%	87	91	78	100	86

PAHs in Soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	12/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.5	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.4	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.3	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.5	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	3.1	<0.05	0.1	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	97	90	97	69	119

PAHs in Soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Phenanthrene	mg/kg	0.2	<0.1	<0.1	<0.1	2.3
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	1.6
Pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	1.8
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	0.8
Chrysene	mg/kg	0.2	<0.1	<0.1	<0.1	1.4
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.9
Benzo(a)pyrene	mg/kg	0.1	<0.05	<0.05	<0.05	0.70
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Total +ve PAH's	mg/kg	1.0	<0.05	<0.05	<0.05	11
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	1.0
Surrogate p-Terphenyl-d14	%	70	65	90	76	75

PAHs in Soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	14/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	14/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	1.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	1.2	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	1.8	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	<0.1	0.9	<0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	1.5	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	<0.2	2.6	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.09	<0.05	1.8	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	0.6	<0.1
Total +ve PAH's	mg/kg	<0.05	0.68	<0.05	12	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	2.3	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	2.3	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	2.4	<0.5
Surrogate p-Terphenyl-d14	%	84	93	95	80	72

PAHs in Soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	0.2	0.1	0.2	<0.1
Pyrene	mg/kg	0.2	0.3	0.2	0.2	0.1
Benzo(a)anthracene	mg/kg	0.2	0.3	0.1	0.2	0.2
Chrysene	mg/kg	0.2	0.3	0.1	0.2	0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.3	0.2	0.2	0.1	0.09
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	0.2	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	0.2	0.2	<0.1	<0.1
Total +ve PAH's	mg/kg	1.7	1.6	0.92	0.79	0.50
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	74	75	105	72	83

PAHs in Soil				
Our Reference		312491-63	312491-64	312491-68
Your Reference	UNITS	DUP02	DUP03	BH30 - [TRIPLICATE]
Depth		-	-	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	12/12/2022
Date analysed	-	09/12/2022	09/12/2022	13/12/2022
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	0.5
Anthracene	mg/kg	<0.1	<0.1	0.2
Fluoranthene	mg/kg	<0.1	0.1	1.0
Pyrene	mg/kg	<0.1	0.1	1.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.8
Chrysene	mg/kg	<0.1	0.1	0.5
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	0.9
Benzo(a)pyrene	mg/kg	<0.05	0.2	0.52
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	0.3
Total +ve PAH's	mg/kg	<0.05	0.86	6.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	0.7
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	0.8
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	0.8
Surrogate p-Terphenyl-d14	%	65	71	74

Organochlorine Pesticides in soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	76	84	87	84

Organochlorine Pesticides in soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	12/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	92	104	111	99

Organochlorine Pesticides in soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.1	<0.1	<0.1	1.2
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	85	103	103	127

Organochlorine Pesticides in soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	14/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	14/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	120	106	101	102	84

Organochlorine Pesticides in soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	81	113	84	101

Organochlorine Pesticides in soil			
Our Reference		312491-63	312491-64
Your Reference	UNITS	DUP02	DUP03
Depth		-	-
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	129	92

Organophosphorus Pesticides in Soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	76	84	87	84

Organophosphorus Pesticides in Soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	12/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	92	104	111	99

Organophosphorus Pesticides in Soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	85	103	103	127

Organophosphorus Pesticides in Soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	120	106	101	102	99

Organophosphorus Pesticides in Soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	81	113	84	101

Organophosphorus Pesticides in Soil			
Our Reference		312491-63	312491-64
Your Reference	UNITS	DUP02	DUP03
Depth		-	-
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	129	92

PCBs in Soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	76	84	87	84

PCBs in Soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	06/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	12/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	92	104	111	99

PCBs in Soil						
Our Reference		312491-30	312491-31	312491-35	312491-36	312491-40
Your Reference	UNITS	BH24	BH24	BH25	BH25	BH26
Depth		0.1	0.5	0.15	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	85	103	103	127

PCBs in Soil						
Our Reference		312491-41	312491-45	312491-46	312491-49	312491-52
Your Reference	UNITS	BH26	BH27	BH27	BH30	BH30
Depth		0.5	0.1	0.5	0.1	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	120	106	101	102	99

PCBs in Soil						
Our Reference		312491-55	312491-56	312491-60	312491-61	312491-62
Your Reference	UNITS	BH33	BH33	BH42	BH43	BH43
Depth		0.1	0.5	0.1	0.1	0.3
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	81	113	84	101

PCBs in Soil			
Our Reference		312491-63	312491-64
Your Reference	UNITS	DUP02	DUP03
Depth		-	-
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	129	92

Acid Extractable metals in soil						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	<4	5	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	3	14	9	17
Copper	mg/kg	25	25	33	77	51
Lead	mg/kg	19	13	17	28	32
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	2	11	33	7
Zinc	mg/kg	34	18	30	160	46

Acid Extractable metals in soil						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	35	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	11	5	16	3
Copper	mg/kg	93	58	63	50	88
Lead	mg/kg	43	21	45	34	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Nickel	mg/kg	76	11	38	12	3
Zinc	mg/kg	360	35	150	35	240

Acid Extractable metals in soil						
Our Reference		312491-28	312491-30	312491-31	312491-35	312491-36
Your Reference	UNITS	BH17	BH24	BH24	BH25	BH25
Depth		2	0.1	0.5	0.15	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	[NA]	<4	<4	<4	<4
Cadmium	mg/kg	[NA]	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	[NA]	20	7	7	6
Copper	mg/kg	[NA]	37	76	35	79
Lead	mg/kg	[NA]	29	18	15	18
Mercury	mg/kg	[NA]	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	[NA]	22	10	4	10
Zinc	mg/kg	[NA]	59	57	23	59
Iron	mg/kg	27,000	[NA]	[NA]	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference		312491-40	312491-41	312491-45	312491-46	312491-47
Your Reference	UNITS	BH26	BH26	BH27	BH27	BH27
Depth		0.1	0.5	0.1	0.5	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	<4	5	10	4	[NA]
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	[NA]
Chromium	mg/kg	16	5	25	20	[NA]
Copper	mg/kg	23	21	51	27	[NA]
Lead	mg/kg	13	12	160	22	[NA]
Mercury	mg/kg	<0.1	<0.1	0.1	<0.1	[NA]
Nickel	mg/kg	16	2	12	3	[NA]
Zinc	mg/kg	32	17	92	10	[NA]
Iron	mg/kg	[NA]	[NA]	[NA]	[NA]	32,000

Acid Extractable metals in soil						
Our Reference		312491-49	312491-52	312491-55	312491-56	312491-60
Your Reference	UNITS	BH30	BH30	BH33	BH33	BH42
Depth		0.1	1	0.1	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	<4	7	<4	7	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	25	17	22	15
Copper	mg/kg	26	26	32	160	43
Lead	mg/kg	36	38	89	42	31
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	9	9	9	10
Zinc	mg/kg	41	34	54	61	110

Acid Extractable metals in soil						
Our Reference		312491-61	312491-62	312491-63	312491-64	312491-66
Your Reference	UNITS	BH43	BH43	DUP02	DUP03	BH09 - [TRIPLICATE]
Depth		0.1	0.3	-	-	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Arsenic	mg/kg	6	5	4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	12	24	16	13
Copper	mg/kg	35	34	28	38	14
Lead	mg/kg	26	29	25	32	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	16	9	5	10	7
Zinc	mg/kg	47	30	12	120	27

Acid Extractable metals in soil		
Our Reference		312491-67
Your Reference	UNITS	BH17 - [TRIPLICATE]
Depth		0.5
Date Sampled		6/12/2022
Type of sample		Soil
Date prepared	-	08/12/2022
Date analysed	-	08/12/2022
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	3
Copper	mg/kg	75
Lead	mg/kg	20
Mercury	mg/kg	<0.1
Nickel	mg/kg	3
Zinc	mg/kg	130

Moisture						
Our Reference		312491-1	312491-4	312491-10	312491-14	312491-15
Your Reference	UNITS	BH09	BH09	BH13	BH13	BH14
Depth		0.1	2	0.1	2.7	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	14	12	7.6	8.0	7.9

Moisture						
Our Reference		312491-16	312491-20	312491-21	312491-25	312491-26
Your Reference	UNITS	BH14	BH16	BH16	BH17	BH17
Depth		0.5	0.1	0.5	0.1	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	9.2	3.5	7.8	13	12

Moisture						
Our Reference		312491-28	312491-30	312491-31	312491-35	312491-36
Your Reference	UNITS	BH17	BH24	BH24	BH25	BH25
Depth		2	0.1	0.5	0.15	0.5
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	7.1	11	10	12	11

Moisture						
Our Reference		312491-40	312491-41	312491-45	312491-46	312491-47
Your Reference	UNITS	BH26	BH26	BH27	BH27	BH27
Depth		0.1	0.5	0.1	0.5	1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	6.9	10	14	20	16

Moisture						
Our Reference		312491-49	312491-52	312491-55	312491-56	312491-60
Your Reference	UNITS	BH30	BH30	BH33	BH33	BH42
Depth		0.1	1	0.1	0.5	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	11	16	9.3	19	15

Moisture					
Our Reference		312491-61	312491-62	312491-63	312491-64
Your Reference	UNITS	BH43	BH43	DUP02	DUP03
Depth		0.1	0.3	-	-
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Moisture	%	14	13	20	16

Asbestos ID - soils						
Our Reference		312491-1	312491-10	312491-15	312491-20	312491-25
Your Reference	UNITS	BH09	BH13	BH14	BH16	BH17
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Sample mass tested	g	Approx. 80g	Approx. 50g	Approx. 50g	Approx. 70g	Approx. 65g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Grey coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		312491-30	312491-35	312491-40	312491-45	312491-49
Your Reference	UNITS	BH24	BH25	BH26	BH27	BH30
Depth		0.1	0.15	0.1	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Sample mass tested	g	Approx. 50g	Approx. 35g	Approx. 55g	Approx. 65g	Approx. 55g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Grey coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils				
Our Reference		312491-55	312491-60	312491-61
Your Reference	UNITS	BH33	BH42	BH43
Depth		0.1	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
Date analysed	-	12/12/2022	12/12/2022	12/12/2022
Sample mass tested	g	Approx. 70g	Approx. 50g	Approx. 50g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

PFAS in Soils Extended				
Our Reference		312491-1	312491-10	312491-30
Your Reference	UNITS	BH09	BH13	BH24
Depth		0.1	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
Date prepared	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022	09/12/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.3	<0.1	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	100	101	99
Surrogate $^{13}C_2$ *PFOA*	%	101	101	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	86	91	90
Extracted ISTD $^{18}O_2$ *PFHxS*	%	89	90	91
Extracted ISTD $^{13}C_4$ *PFOS*	%	91	93	93

PFAS in Soils Extended				
Our Reference		312491-1	312491-10	312491-30
Your Reference	UNITS	BH09	BH13	BH24
Depth		0.1	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	87	92	87
Extracted ISTD $^{13}C_3$ *PFPeA*	%	87	91	86
Extracted ISTD $^{13}C_2$ *PFHxA*	%	85	85	85
Extracted ISTD $^{13}C_4$ *PFHpA*	%	83	85	83
Extracted ISTD $^{13}C_4$ *PFOA*	%	87	87	89
Extracted ISTD $^{13}C_5$ *PFNA*	%	93	99	95
Extracted ISTD $^{13}C_2$ *PFDA*	%	85	84	81
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	90	92	88
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	96	94	94
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	94	84	90
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	85	99	82
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	90	91	89
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	104	109	100
Extracted ISTD $^{13}C_8$ *FOSA*	%	97	102	99
Extracted ISTD d_3 *N MeFOSA*	%	87	85	86
Extracted ISTD d_5 *N EtFOSA*	%	105	107	102
Extracted ISTD d_7 *N MeFOSE*	%	97	101	97
Extracted ISTD d_9 *N EtFOSE*	%	85	92	81
Extracted ISTD d_3 *N MeFOSAA*	%	81	77	82
Extracted ISTD d_5 *N EtFOSAA*	%	97	91	90
Total Positive PFHxS & PFOS	µg/kg	0.3	<0.1	<0.1
Total Positive PFOS & PFOA	µg/kg	0.3	<0.1	<0.1
Total Positive PFAS	µg/kg	0.3	<0.1	<0.1

CEC			
Our Reference		312491-28	312491-47
Your Reference	UNITS	BH17	BH27
Depth		2	1
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date prepared	-	14/12/2022	14/12/2022
Date analysed	-	14/12/2022	14/12/2022
Exchangeable Ca	meq/100g	0.4	0.5
Exchangeable K	meq/100g	0.4	<0.1
Exchangeable Mg	meq/100g	3.6	1.4
Exchangeable Na	meq/100g	2.4	0.2
Cation Exchange Capacity	meq/100g	6.8	2.2

Clay 50-120g			
Our Reference		312491-28	312491-47
Your Reference	UNITS	BH17	BH27
Depth		2	1
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date prepared	-	08/12/2022	08/12/2022
Date analysed	-	09/12/2022	09/12/2022
Clay in soils <2µm	% (w/w)	39	53

Misc Inorg - Soil			
Our Reference		312491-28	312491-47
Your Reference	UNITS	BH17	BH27
Depth		2	1
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date prepared	-	09/12/2022	09/12/2022
Date analysed	-	09/12/2022	09/12/2022
Ammonia as N in soil	mg/kg	2.2	2.2
Total Organic Carbon (Walkley Black)	mg/kg	4,000	<1000
pH 1:5 soil:$CaCl_2$	pH Units	4.4	3.7

Chromium Suite				
Our Reference		312491-4	312491-6	312491-7
Your Reference	UNITS	BH09	BH09	BH09
Depth		2	4	5
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022
pH $_{kcl}$	pH units	5.4	6.5	7.0
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01
TAA pH 6.5	moles H^+ /t	<5	<5	<5
Chromium Reducible Sulfur	%w/w	0.008	<0.005	0.01
a-Chromium Reducible Sulfur	moles H^+ /t	5	<3	7
S_{HCl}	%w/w S	[NT]	[NT]	[NT]
S_{KCl}	%w/w S	[NT]	[NT]	[NT]
S_{NAS}	%w/w S	[NT]	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	[NT]	[NT]	0.70
s-ANC_{BT}	%w/w S	[NT]	[NT]	0.22
s-Net Acidity	%w/w S	0.012	<0.005	<0.005
a-Net Acidity	moles H^+ /t	7.5	<5	<5
Liming rate	kg $CaCO_3$ /t	<0.75	<0.75	<0.75
a-Net Acidity without ANCE	moles H^+ /t	7.5	<5	6.8
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	<0.75	<0.75
s-Net Acidity without ANCE	%w/w S	0.012	<0.005	0.011

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Inorg-057	Ammonia - determined colourimetrically, based on APHA latest edition 4500-NH3 F. Waters samples are filtered on receipt prior to analysis. Soils are analysed following a KCl extraction.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Net acidity including ANC has a safety factor of 1.5 applied. Neutralising value (NV) of 100% is assumed for liming rate. Based on National acid sulfate soils identification and laboratory methods manual June 2018. The recommendation that the SHCL concentration be multiplied by a factor of 2 to ensure retained acidity is not underestimated, has not been applied in the SHCL results reported.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
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.

Method ID	Methodology Summary
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.
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.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			12/12/2022	1	12/12/2022	12/12/2022		12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	92	106
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	92	106
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	109	125
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	104	123
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	79	89
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	84	96
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	84	94
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	92	1	89	100	12	91	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	12/12/2022	12/12/2022		12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	26	<25	<25	0	99	108
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	26	<25	<25	0	99	108
Benzene	mg/kg	0.2	Org-023	[NT]	26	<0.2	<0.2	0	123	124
Toluene	mg/kg	0.5	Org-023	[NT]	26	<0.5	<0.5	0	118	122
Ethylbenzene	mg/kg	1	Org-023	[NT]	26	<1	<1	0	81	92
m+p-xylene	mg/kg	2	Org-023	[NT]	26	<2	<2	0	87	100
o-Xylene	mg/kg	1	Org-023	[NT]	26	<1	<1	0	84	97
Naphthalene	mg/kg	1	Org-023	[NT]	26	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	26	101	93	8	96	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	12/12/2022	12/12/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	49	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	49	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	49	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	49	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	49	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	49	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	49	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	49	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	49	99	97	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	87	102
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	86	91
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	110	<100	10	114	100
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	87	102
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	170	130	27	86	91
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	100
Surrogate o-Terphenyl	%		Org-020	85	1	90	88	2	102	84

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	11/12/2022	11/12/2022		11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	26	<50	<50	0	111	101
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	26	<100	<100	0	102	88
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	26	<100	<100	0	129	76
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	26	<50	<50	0	111	101
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	26	<100	<100	0	102	88
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	26	<100	<100	0	129	76
Surrogate o-Terphenyl	%		Org-020	[NT]	26	91	100	9	102	84

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	11/12/2022	11/12/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	49	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	49	<100	110	10	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	49	110	140	24	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	49	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	49	180	200	11	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	49	<100	130	26	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	49	96	106	10	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			14/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			14/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	93
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	107	103
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	105
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	96
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	96	96
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.3	40	97	97
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	98	65
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	0.07	0.1	35	92	114
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	89	1	87	94	8	93	85

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	105	99
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	107	97
Fluorene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	107	97
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	108	95
Anthracene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	96	73
Pyrene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	95	76
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	87	92
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	26	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	26	<0.05	<0.05	0	120	100
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	26	119	71	51	92	82

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	09/12/2022	09/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	49	1.1	1.4	24	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	49	0.2	0.3	40	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	49	1.2	1.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	49	1.8	1.5	18	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	49	0.9	1.1	20	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	49	1.5	1.1	31	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	49	2.6	0.9	97	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	49	1.8	0.74	83	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	49	0.3	0.6	67	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	49	0.6	0.5	18	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	49	80	74	8	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			14/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			14/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	108
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	122	114
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	95	89
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	99	105
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	96
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	98	103
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	96
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	64	70
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	92	98
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	86
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	101	1	78	88	12	93	90

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	09/12/2022	09/12/2022		09/12/2022	09/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	104	98
HCB	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	112	100
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	117	107
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	116	96
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	94	84
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	96	86
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	112	100
Endrin	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	84	80
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	84	80
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	71	70
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	26	99	97	2	117	87

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	09/12/2022	09/12/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	49	102	88	15	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	69	67
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	77	87
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	101
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	83	103
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	100
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	68
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	80	72
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	101	1	78	88	12	93	90

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	102	82
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	99	85
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	97	85
Malathion	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	77	71
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	110	100
Parathion	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	66	119
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	88	87
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	26	99	97	2	117	87

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	09/12/2022	09/12/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	49	102	88	15	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date extracted	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
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	119	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	101	1	78	88	12	93	90

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date extracted	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	122	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	26	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	26	99	97	2	117	87

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	09/12/2022	09/12/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	49	102	88	15	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	312491-4
Date prepared	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			08/12/2022	1	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	100	99
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	98
Chromium	mg/kg	1	Metals-020	<1	1	11	7	44	105	98
Copper	mg/kg	1	Metals-020	<1	1	25	14	56	102	74
Lead	mg/kg	1	Metals-020	<1	1	19	15	24	102	99
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	94	85
Nickel	mg/kg	1	Metals-020	<1	1	6	3	67	100	97
Zinc	mg/kg	1	Metals-020	<1	1	34	14	83	102	97
Iron	mg/kg	10	Metals-020	<10	[NT]	[NT]	[NT]	[NT]	102	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	312491-52
Date prepared	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Date analysed	-			[NT]	26	08/12/2022	08/12/2022		08/12/2022	08/12/2022
Arsenic	mg/kg	4	Metals-020	[NT]	26	<4	<4	0	103	76
Cadmium	mg/kg	0.4	Metals-020	[NT]	26	<0.4	<0.4	0	102	71
Chromium	mg/kg	1	Metals-020	[NT]	26	3	3	0	110	85
Copper	mg/kg	1	Metals-020	[NT]	26	88	64	32	108	90
Lead	mg/kg	1	Metals-020	[NT]	26	21	19	10	107	75
Mercury	mg/kg	0.1	Metals-021	[NT]	26	0.4	0.3	29	98	86
Nickel	mg/kg	1	Metals-020	[NT]	26	3	3	0	105	70
Zinc	mg/kg	1	Metals-020	[NT]	26	240	87	94	107	##
Iron	mg/kg	10	Metals-020	[NT]	[NT]	[NT]	[NT]	[NT]	109	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Date analysed	-			[NT]	49	08/12/2022	08/12/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	49	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	49	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	49	12	11	9	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	49	26	23	12	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	49	36	38	5	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	49	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	49	7	7	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	49	41	42	2	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date prepared	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	[NT]
Date analysed	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	92	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	95	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	92	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	0.3	0.3	0	97	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	91	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	101	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	96	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	101	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	100	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	100	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	93	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	109	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	97	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	100	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	98	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	105	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	99	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	87	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	93	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	95	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	100	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	99	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	94	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	106	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	98	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	93	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	100	1	100	98	2	102	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	1	101	103	2	104	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	78	1	86	87	1	92	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	79	1	89	90	1	97	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	84	1	91	93	2	97	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	83	1	87	89	2	95	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	80	1	87	85	2	94	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	78	1	85	82	4	92	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	79	1	83	84	1	91	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	78	1	87	87	0	90	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	85	1	93	96	3	97	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	80	1	85	82	4	94	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	84	1	90	86	5	96	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	83	1	96	96	0	103	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	88	1	94	94	0	106	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	82	1	85	89	5	87	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	81	1	90	91	1	92	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	89	1	104	111	7	100	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	91	1	97	97	0	99	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	80	1	87	89	2	96	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	87	1	105	104	1	103	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	85	1	97	98	1	100	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	78	1	85	91	7	95	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	78	1	81	80	1	92	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	84	1	97	93	4	96	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Date analysed	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]

QUALITY CONTROL: Misc Inorg - Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	[NT]
Date prepared	-			09/12/2022	28	09/12/2022	09/12/2022		09/12/2022	[NT]
Date analysed	-			09/12/2022	28	09/12/2022	09/12/2022		09/12/2022	[NT]
Ammonia as N in soil	mg/kg	0.5	Inorg-057	<0.5	28	2.2	2.1	5	105	[NT]
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	28	4000	[NT]		102	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	28	4.4	[NT]		99	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Date analysed	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	79	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	118	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 312491-1 for Cu and Zn. Therefore a triplicate result has been issued as laboratory sample number 312491-66.
- The laboratory RPD acceptance criteria has been exceeded for 312491-26 for Zn. Therefore a triplicate result has been issued as laboratory sample number 312491-67.
-# Percent recovery is not applicable due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.
- ## Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

PAHs in Soil - The laboratory RPD acceptance criteria has been exceeded for 312491-49. Therefore a triplicate result has been issued as laboratory sample number 312491-68.

Envirolab Services Pty Ltd
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12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312491-A
Date Sample Received	07/12/2022
Date Instructions Received	13/12/2022
Date Results Expected to be Reported	20/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
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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Sample ID	VOCs in soil	On Hold
BH09-0.1		✓
BH09-0.5	✓	
BH09-1		✓
BH09-2		✓
BH09-3		✓
BH09-4		✓
BH09-5		✓
BH09-6		✓
BH09-7		✓
BH13-0.1		✓
BH13-0.5		✓
BH13-1		✓
BH13-1.6		✓
BH13-2.7		✓
BH14-0.1		✓
BH14-0.5		✓
BH14-1		✓
BH14-2		✓
BH14-2.5		✓
BH16-0.1		✓
BH16-0.5		✓
BH16-1		✓
BH16-2		✓
BH16-3		✓
BH17-0.1		✓
BH17-0.5		✓
BH17-1		✓
BH17-2		✓
BH17-2.5		✓
BH24-0.1		✓
BH24-0.5		✓
BH24-1		✓

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Sample ID	VOCs in soil	On Hold
BH24-2		✓
BH24-3		✓
BH25-0.15		✓
BH25-0.5		✓
BH25-1		✓
BH25-2		✓
BH25-3		✓
BH26-0.1		✓
BH26-0.5		✓
BH26-1		✓
BH26-2		✓
BH26-3		✓
BH27-0.1		✓
BH27-0.5		✓
BH27-1		✓
BH27-2		✓
BH30-0.1		✓
BH30-0.3		✓
BH30-0.5		✓
BH30-1		✓
BH30-2		✓
BH30-3		✓
BH33-0.1		✓
BH33-0.5		✓
BH33-1		✓
BH33-2		✓
BH33-3		✓
BH42-0.1		✓
BH43-0.1		✓
BH43-0.3		✓
DUP02		✓
DUP03		✓

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Sample ID	VOCs in soil	On Hold
BH13-2.0		✓
BH09 - [TRIPLICATE]-0.1		✓
BH17 - [TRIPLICATE]-0.5		✓
BH30 - [TRIPLICATE]-0.1		✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 13 December 2022 12:55 PM
To: Samplereceipt; Login
Cc: Dean Stafford
Subject: 22038 - Additional Analysis

Ref: 312491-A
TAT: Standard
Due: 20/12/2022
MT

Categories: Additional

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please schedule the following analysis for the project 22038:

- VOC
  - BH07 - 1.0
  - BH09 - 0.5 312491-2
  - BH15 - 3.0
  - BH38 - 0.4
  - BH40 - 0.25
  - BH44 - 0.25
  - BH45 - 0.2
- Combo 6a
  - SS01

Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
+61 408 988 954

REDITUS

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CERTIFICATE OF ANALYSIS 312491-A

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	07/12/2022
Date completed instructions received	13/12/2022

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

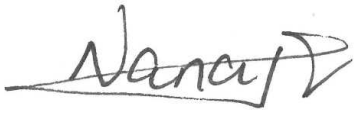
Date results requested by	20/12/2022
Date of Issue	20/12/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Josh Williams, Organics and LC Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil		
Our Reference		312491-A-2
Your Reference	UNITS	BH09
Depth		0.5
Date Sampled		6/12/2022
Type of sample		Soil
Date extracted	-	14/12/2022
Date analysed	-	19/12/2022
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1

VOCs in soil		
Our Reference		312491-A-2
Your Reference	UNITS	BH09
Depth		0.5
Date Sampled		6/12/2022
Type of sample		Soil
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	106
Surrogate aaa-Trifluorotoluene	%	115
Surrogate Toluene-d_8	%	102
Surrogate 4-Bromofluorobenzene	%	93

Moisture		
Our Reference		312491-A-2
Your Reference	UNITS	BH09
Depth		0.5
Date Sampled		6/12/2022
Type of sample		Soil
Date prepared	-	14/12/2022
Date analysed	-	15/12/2022
Moisture	%	12

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date extracted	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	[NT]
Date analysed	-			19/12/2022	[NT]	[NT]	[NT]	[NT]	19/12/2022	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	113	[NT]
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	[NT]
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	119	[NT]
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	112	[NT]
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	[NT]
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	128	[NT]
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	120	[NT]
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	107	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	129	[NT]	[NT]	[NT]	[NT]	116	[NT]
Surrogate Toluene-d_8	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	95	[NT]	[NT]	[NT]	[NT]	98	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

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	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312491-B
Date Sample Received	07/12/2022
Date Instructions Received	20/12/2022
Date Results Expected to be Reported	05/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance: PAH

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

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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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Lead	Nickel	On Hold
BH09-0.1																					✓
BH09-0.5																					✓
BH09-1																					✓
BH09-2																					✓
BH09-3																					✓
BH09-4																					✓
BH09-5																					✓
BH09-6																					✓
BH09-7																					✓
BH13-0.1																					✓
BH13-0.5																					✓
BH13-1																					✓
BH13-1.6																					✓
BH13-2.7																					✓
BH14-0.1																					✓
BH14-0.5	✓																			✓	
BH14-1																					✓
BH14-2																					✓
BH14-2.5																					✓
BH16-0.1																					✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Lead	Nickel	On Hold
BH16-0.5																					✓
BH16-1																					✓
BH16-2																					✓
BH16-3																					✓
BH17-0.1																					✓
BH17-0.5																					✓
BH17-1																					✓
BH17-2																					✓
BH17-2.5																					✓
BH24-0.1																					✓
BH24-0.5																					✓
BH24-1																					✓
BH24-2																					✓
BH24-3																					✓
BH25-0.15																					✓
BH25-0.5																					✓
BH25-1																					✓
BH25-2																					✓
BH25-3																					✓
BH26-0.1																					✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Lead	Nickel	On Hold
BH26-0.5																					✓
BH26-1																					✓
BH26-2																					✓
BH26-3																					✓
BH27-0.1	✓																		✓		
BH27-0.5																					✓
BH27-1																					✓
BH27-2																					✓
BH30-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH30-0.3																					✓
BH30-0.5																					✓
BH30-1																					✓
BH30-2																					✓
BH30-3																					✓
BH33-0.1																					✓
BH33-0.5																					✓
BH33-1																					✓
BH33-2																					✓
BH33-3																					✓
BH42-0.1																					✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Lead	Nickel	On Hold
BH43-0.1																					✓
BH43-0.3																					✓
DUP02																					✓
DUP03																					✓
BH13-2.0																					✓
BH09 - [TRIPLICATE]-0.1																					✓
BH17 - [TRIPLICATE]-0.5																					✓
BH30 - [TRIPLICATE]-0.1																					✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 20 December 2022 6:02 PM
To: Login; Samplereceipt
Cc: Dean Stafford
Subject: 22038 - Further analysis

Ref: 312491-B
TAT: Standard.
Due: 05/01/2023 MT

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please have the following further analysis for samples from the project 22038 on standard TAT:

- TCLP - Benzo(a)pyrene
  - BH02 - 0.1
  - BH08 - 0.1
  - BH11 - 0.1
  - BH29 - 0.4
  - BH30 - 0.1 312491-A9
  - BH38 - 0.15
  - BH38 - 0.4
  - BH40 - 0.25
  - BH40 - 0.5
  - BH45 - 0.2
  - BH45 - 0.5
- TCLP - Lead
  - BH27 - 0.1 312491-15
- TCLP - Nickel
  - BH05 - 0.1
  - BH14 - 0.5 312491-16
  - BH32 - 0.1

Any questions please let me know
Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
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CERTIFICATE OF ANALYSIS 312491-B

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	07/12/2022
Date completed instructions received	20/12/2022

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

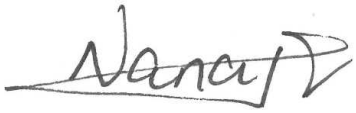
Date results requested by	05/01/2023
Date of Issue	04/01/2023

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Results Approved By
Hannah Nguyen, Metals Supervisor
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid				
Our Reference		312491-B-16	312491-B-45	312491-B-49
Your Reference	UNITS	BH14	BH27	BH30
Depth		0.5	0.1	0.1
Date Sampled		6/12/2022	6/12/2022	6/12/2022
Type of sample		Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.7	8.3	10.9
pH of soil TCLP (after HCl)	pH units	1.6	1.7	3.0
Extraction fluid used		1	1	1
pH of final Leachate	pH units	5.0	5.0	7.0

PAHs in TCLP (USEPA 1311)		
Our Reference		312491-B-49
Your Reference	UNITS	BH30
Depth		0.1
Date Sampled		6/12/2022
Type of sample		Soil
Date extracted	-	22/12/2022
Date analysed	-	22/12/2022
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	70

Metals from Leaching Fluid pH 2.9 or 5			
Our Reference		312491-B-16	312491-B-45
Your Reference	UNITS	BH14	BH27
Depth		0.5	0.1
Date Sampled		6/12/2022	6/12/2022
Type of sample		Soil	Soil
Date extracted	-	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022
Lead	mg/L	[NA]	<0.03
Nickel	mg/L	<0.02	[NA]

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	87	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	312491-B-45
Date extracted	-			22/12/2022	16	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			22/12/2022	16	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Lead	mg/L	0.03	Metals-020	<0.03	[NT]	[NT]	[NT]	[NT]	96	93
Nickel	mg/L	0.02	Metals-020	<0.02	16	<0.02	0.02	0	95	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Envirolab Services Pty Ltd
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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma, Dean Stafford

Sample Login Details

Your reference	22038
Envirolab Reference	312652
Date Sample Received	08/12/2022
Date Instructions Received	08/12/2022
Date Results Expected to be Reported	15/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	28 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Extra PFAS jar received labelled BH10 0.1

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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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	CEC	Clay 50-120g	Misc Inorg - Soil	Chromium Suite	On Hold
BH12 -0.1	✓	✓	✓	✓	✓	✓	✓	✓					
BH12-0.5	✓	✓	✓	✓	✓	✓	✓						
BH12-1													✓
BH12-2							✓		✓	✓	✓		
BH12-3													✓
BH12-4												✓	
BH12-5												✓	
BH12-6													✓
BH12-7													✓
BH12-8													✓
BH15-0.1	✓	✓	✓	✓	✓	✓	✓	✓					
BH15-0.5	✓	✓	✓	✓	✓	✓	✓						
BH15-1													✓
BH15-2													✓
BH15-3												✓	
BH15-4												✓	
BH15-5													✓
BH15-6													✓
BH35-0.5	✓	✓	✓	✓	✓	✓	✓	✓					
BH35-0.7	✓	✓	✓	✓	✓	✓	✓						
BH36-0.25	✓	✓	✓	✓	✓	✓	✓	✓					
BH36-0.4	✓	✓	✓	✓	✓	✓	✓						
BH44-0.25	✓	✓	✓	✓	✓	✓	✓	✓					
BH44-0.35	✓	✓	✓	✓	✓	✓	✓						
BH45-0.2	✓	✓	✓	✓	✓	✓	✓	✓					
BH45-0.5	✓	✓	✓	✓	✓	✓	✓						
DUP04	✓	✓	✓	✓	✓	✓	✓						
BH10-0.1													✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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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.

CHAIN OF CUSTODY FORM - Client

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ENVIROLAB GROUP
National phone number 1300 424 344

Sydney Lab - Envirolab Services
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T 07 3266 9532 | E brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
T 08 8967 1201 | E darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	PO No.: 22038
Project Mgr: Dean Stafford	Envirolab Quote No. :
Sampler: Jack Palma	Date results required: Standard
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 155 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample information					Tests Required														Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	Asbestos Characterisation	Chromium Reducible Suite								Provide as much information about the sample as you can
1	BH12	0.1	07/12/2022	Soil		x													
2	BH12	0.5	07/12/2022	Soil			x												
3	BH12	1	07/12/2022	Soil	x														
4	BH12	2	07/12/2022	Soil						x									
5	BH12	3	07/12/2022	Soil	x														
6	BH12	4	07/12/2022	Soil							x								
7	BH12	5	07/12/2022	Soil							x								
8	BH12	6	07/12/2022	Soil	x														
9	BH12	7	07/12/2022	Soil	x														
10	BH12	8	07/12/2022	Soil	x														
11	BH15	0.1	07/12/2022	Soil		x													
12	BH15	0.5	07/12/2022	Soil			x												
13	BH15	1	07/12/2022	Soil	x														
14	BH15	2	07/12/2022	Soil	x														
15	BH15	3	07/12/2022	Soil							x								
16	BH15	4	07/12/2022	Soil							x								
17	BH15	5	07/12/2022	Soil	x														
18	BH15	6	07/12/2022	Soil	x														
19	BH35	0.5	07/12/2022	Soil		x													
20	BH35	0.7	07/12/2022	Soil			x												
21	BH36	0.25	07/12/2022	Soil		x													
22	BH36	0.4	07/12/2022	Soil			x												
23	BH44	0.25	07/12/2022	Soil		x													
24	BH44	0.35	07/12/2022	Soil			x												
25	BH45	0.2	07/12/2022	Soil		x													
26	BH45	0.5	07/12/2022	Soil			x												
27	DUP04	-	07/12/2022	Soil			x												
—	TRIP04	-	07/12/2022	Soil			x												Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company): ~~EMS SYD~~ HTL	*Lab Use Only*	
Print Name: Jack Palma	Print Name: ~~8/12/2022~~	Job number: 312652	Cooling: Ice / Ice pack / None
Date & Time: 08/12/2022	Date & Time: 8/12/2022 16:30	Temperature: 14°C	Security seal: Intact / Broken / None
Signature:	Signature: HTL	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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

Job No: 312652
Date Received: 8/12/2022
Time Received: 10:30
Received By: HTL
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

28 = extra BH10 - 0.1

3 esdats

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CERTIFICATE OF ANALYSIS 312652

Client Details

Client	Reditus Consulting
Attention	Jack Palma, Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	28 Soil
Date samples received	08/12/2022
Date completed instructions received	08/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	15/12/2022
Date of Issue	15/12/2022

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen
Authorised by Asbestos Approved Signatory: Nyovan Moonean

Results Approved By
Diego Bigolin, Inorganics Supervisor
Giovanni Agosti, Group Technical Manager
Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist
Nick Sarlamis, Assistant Operation Manager
Nyovan Moonean, Asbestos Approved Identifier/Counter
Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	102	100	95	101

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	96	92	101	108	96

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		312652-25	312652-26	312652-27
Your Reference	UNITS	BH45	BH45	DUP04
Depth		0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022
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	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	105	96	104

svTRH (C10-C40) in Soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	86	91	93	94	83

svTRH (C10-C40) in Soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	110	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	110	<50	<50	<50
Surrogate o-Terphenyl	%	85	95	95	96	105

svTRH (C10-C40) in Soil				
Our Reference		312652-25	312652-26	312652-27
Your Reference	UNITS	BH45	BH45	DUP04
Depth		0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	13/12/2022	11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	140	<50	<50
TRH C_{15} - C_{28}	mg/kg	8,400	<100	<100
TRH C_{29} - C_{36}	mg/kg	4,900	<100	<100
Total +ve TRH (C10-C36)	mg/kg	13,000	<50	<50
TRH >C_{10} -C_{16}	mg/kg	300	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	300	<50	<50
TRH >C_{16} -C_{34}	mg/kg	12,000	100	<100
TRH >C_{34} -C_{40}	mg/kg	2,200	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	15,000	100	<50
Surrogate o-Terphenyl	%	#	91	79

PAHs in Soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.82	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	110	111	121	97	111

PAHs in Soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	1.0	<0.1	0.1	<0.1
Pyrene	mg/kg	<0.1	0.8	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.6	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.7	<0.1	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	1	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.53	<0.05	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	5.9	<0.05	0.54	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.7	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	116	111	115	118	117

PAHs in Soil					
Our Reference		312652-25	312652-26	312652-27	312652-29
Your Reference	UNITS	BH45	BH45	DUP04	BH36 - [TRIPLICATE]
Depth		0.2	0.5	-	0.25
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Naphthalene	mg/kg	1.3	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	3.2	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	7.2	<0.1	<0.1	<0.1
Fluorene	mg/kg	2.6	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	90	1.1	<0.1	0.2
Anthracene	mg/kg	38	0.5	<0.1	<0.1
Fluoranthene	mg/kg	240	3.6	0.2	0.7
Pyrene	mg/kg	210	3.1	0.2	0.7
Benzo(a)anthracene	mg/kg	96	1.4	0.2	0.5
Chrysene	mg/kg	100	1.5	0.2	0.5
Benzo(b,j+k)fluoranthene	mg/kg	130	2	0.2	1
Benzo(a)pyrene	mg/kg	79	0.98	0.2	0.59
Indeno(1,2,3-c,d)pyrene	mg/kg	32	0.4	0.1	0.4
Dibenzo(a,h)anthracene	mg/kg	8.9	0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	38	0.6	0.1	0.5
Total +ve PAH's	mg/kg	1,100	15	1.5	5.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	120	1.5	<0.5	0.9
Benzo(a)pyrene TEQ calc(half)	mg/kg	120	1.5	<0.5	0.9
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	120	1.5	<0.5	0.9
Surrogate p-Terphenyl-d14	%	97	113	88	78

Organochlorine Pesticides in soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	100	99	99	88

Organochlorine Pesticides in soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	0.3	0.3	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	98	94	101	98

Organochlorine Pesticides in soil				
Our Reference		312652-25	312652-26	312652-27
Your Reference	UNITS	BH45	BH45	DUP04
Depth		0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	12/12/2022
alpha-BHC	mg/kg	<1	<0.1	<0.1
HCB	mg/kg	<1	<0.1	<0.1
beta-BHC	mg/kg	<1	<0.1	<0.1
gamma-BHC	mg/kg	<1	<0.1	<0.1
Heptachlor	mg/kg	<1	<0.1	<0.1
delta-BHC	mg/kg	<1	<0.1	<0.1
Aldrin	mg/kg	<1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<1	<0.1	<0.1
gamma-Chlordane	mg/kg	<1	<0.1	<0.1
alpha-chlordane	mg/kg	<1	<0.1	<0.1
Endosulfan I	mg/kg	<1	<0.1	<0.1
pp-DDE	mg/kg	<1	<0.1	<0.1
Dieldrin	mg/kg	2.3	8.2	0.1
Endrin	mg/kg	<1	0.2	<0.1
Endosulfan II	mg/kg	<1	<0.1	<0.1
pp-DDD	mg/kg	<1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<1	<0.1	<0.1
pp-DDT	mg/kg	<1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<1	<0.1	<0.1
Methoxychlor	mg/kg	<1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<1	<0.1	<0.1
Surrogate TCMX	%	90	111	90

Organophosphorus Pesticides in Soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	100	99	99	88

Organophosphorus Pesticides in Soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	98	94	101	98

Organophosphorus Pesticides in Soil				
Our Reference		312652-25	312652-26	312652-27
Your Reference	UNITS	BH45	BH45	DUP04
Depth		0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	12/12/2022
Dichlorvos	mg/kg	<1	<0.1	<0.1
Dimethoate	mg/kg	<1	<0.1	<0.1
Diazinon	mg/kg	<1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<1	<0.1	<0.1
Ronnel	mg/kg	<1	<0.1	<0.1
Fenitrothion	mg/kg	<1	<0.1	<0.1
Malathion	mg/kg	<1	<0.1	<0.1
Chlorpyriphos	mg/kg	<1	<0.1	<0.1
Parathion	mg/kg	<1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<1	<0.1	<0.1
Ethion	mg/kg	<1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<1	<0.1	<0.1
Surrogate TCMX	%	90	111	90

PCBs in Soil						
Our Reference		312652-1	312652-2	312652-11	312652-12	312652-19
Your Reference	UNITS	BH12	BH12	BH15	BH15	BH35
Depth		0.1	0.5	0.1	0.5	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	114	100	99	99	88

PCBs in Soil						
Our Reference		312652-20	312652-21	312652-22	312652-23	312652-24
Your Reference	UNITS	BH35	BH36	BH36	BH44	BH44
Depth		0.7	0.25	0.4	0.25	0.35
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	11/12/2022	11/12/2022	11/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	98	94	101	98

PCBs in Soil				
Our Reference		312652-25	312652-26	312652-27
Your Reference	UNITS	BH45	BH45	DUP04
Depth		0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	11/12/2022	11/12/2022	12/12/2022
Aroclor 1016	mg/kg	<1	<0.1	<0.1
Aroclor 1221	mg/kg	<1	<0.1	<0.1
Aroclor 1232	mg/kg	<1	<0.1	<0.1
Aroclor 1242	mg/kg	<1	<0.1	<0.1
Aroclor 1248	mg/kg	<1	<0.1	<0.1
Aroclor 1254	mg/kg	<1	<0.1	<0.1
Aroclor 1260	mg/kg	<1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<1	<0.1	<0.1
Surrogate TCMX	%	90	111	90

Acid Extractable metals in soil						
Our Reference		312652-1	312652-2	312652-4	312652-11	312652-12
Your Reference	UNITS	BH12	BH12	BH12	BH15	BH15
Depth		0.1	0.5	2	0.1	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Arsenic	mg/kg	<4	<4	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	11	9	7	8
Copper	mg/kg	8	8	50	56	60
Lead	mg/kg	15	9	18	17	35
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	9	13	10	12
Zinc	mg/kg	26	22	53	33	43
Iron	mg/kg	[NA]	[NA]	34,000	[NA]	[NA]

Acid Extractable metals in soil						
Our Reference		312652-19	312652-20	312652-21	312652-22	312652-23
Your Reference	UNITS	BH35	BH35	BH36	BH36	BH44
Depth		0.5	0.7	0.25	0.4	0.25
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Arsenic	mg/kg	<4	6	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	19	13	14	8
Copper	mg/kg	34	20	24	32	21
Lead	mg/kg	24	25	53	28	31
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	10	7	10	3
Zinc	mg/kg	23	27	54	38	42

Acid Extractable metals in soil						
Our Reference		312652-24	312652-25	312652-26	312652-27	312652-29
Your Reference	UNITS	BH44	BH45	BH45	DUP04	BH36 - [TRIPLICATE]
Depth		0.35	0.2	0.5	-	0.25
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Arsenic	mg/kg	<4	<4	8	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	1	23	11	12
Copper	mg/kg	28	290	29	17	26
Lead	mg/kg	22	2	30	30	29
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	4	11	4	6
Zinc	mg/kg	18	14	44	39	37

Moisture						
Our Reference		312652-1	312652-2	312652-4	312652-11	312652-12
Your Reference	UNITS	BH12	BH12	BH12	BH15	BH15
Depth		0.1	0.5	2	0.1	0.5
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	11	11	23	7.8	9.7

Moisture						
Our Reference		312652-19	312652-20	312652-21	312652-22	312652-23
Your Reference	UNITS	BH35	BH35	BH36	BH36	BH44
Depth		0.5	0.7	0.25	0.4	0.25
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	17	20	11	9.2	6.3

Moisture					
Our Reference		312652-24	312652-25	312652-26	312652-27
Your Reference	UNITS	BH44	BH45	BH45	DUP04
Depth		0.35	0.2	0.5	-
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	09/12/2022	09/12/2022	09/12/2022	09/12/2022
Date analysed	-	12/12/2022	12/12/2022	12/12/2022	12/12/2022
Moisture	%	11	2.2	30	11

Asbestos ID - soils						
Our Reference		312652-1	312652-11	312652-19	312652-21	312652-23
Your Reference	UNITS	BH12	BH15	BH35	BH36	BH44
Depth		0.1	0.1	0.5	0.25	0.25
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Sample mass tested	g	Approx. 50g	Approx. 55g	Approx. 80g	Approx. 80g	Approx. 80g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		312652-25
Your Reference	UNITS	BH45
Depth		0.2
Date Sampled		07/12/22
Type of sample		Soil
Date analysed	-	13/12/2022
Sample mass tested	g	Approx. 70g
Sample Description	-	Black coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

CEC		
Our Reference		312652-4
Your Reference	UNITS	BH12
Depth		2
Date Sampled		07/12/22
Type of sample		Soil
Date prepared	-	15/12/2022
Date analysed	-	15/12/2022
Exchangeable Ca	meq/100g	20
Exchangeable K	meq/100g	0.4
Exchangeable Mg	meq/100g	1.1
Exchangeable Na	meq/100g	0.5
Cation Exchange Capacity	meq/100g	22

Clay 50-120g		
Our Reference		312652-4
Your Reference	UNITS	BH12
Depth		2
Date Sampled		07/12/22
Type of sample		Soil
Date prepared	-	12/12/2022
Date analysed	-	13/12/2022
Clay in soils <2µm	% (w/w)	33

Misc Inorg - Soil		
Our Reference		312652-4
Your Reference	UNITS	BH12
Depth		2
Date Sampled		07/12/22
Type of sample		Soil
Date prepared	-	13/12/2022
Date analysed	-	13/12/2022
Total Organic Carbon (Walkley Black)	mg/kg	4,000
pH 1:5 soil:$CaCl_2$	pH Units	8.2

Chromium Suite					
Our Reference		312652-6	312652-7	312652-15	312652-16
Your Reference	UNITS	BH12	BH12	BH15	BH15
Depth		4	5	3	4
Date Sampled		07/12/22	07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022
pH $_{kcl}$	pH units	6.7	7.1	7.2	7.6
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
TAA pH 6.5	moles H^+ /t	<5	<5	<5	<5
Chromium Reducible Sulfur	%w/w	<0.005	0.006	<0.005	0.01
a-Chromium Reducible Sulfur	moles H^+ /t	<3	4	<3	8
S_{HCl}	%w/w S	[NT]	[NT]	[NT]	[NT]
S_{KCl}	%w/w S	[NT]	[NT]	[NT]	[NT]
S_{NAS}	%w/w S	[NT]	[NT]	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.50	2.2	0.50	1.9
s-ANC_{BT}	%w/w S	0.16	0.72	0.16	0.61
s-Net Acidity	%w/w S	<0.005	<0.005	<0.005	<0.005
a-Net Acidity	moles H^+ /t	<5	<5	<5	<5
Liming rate	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	<0.75
a-Net Acidity without ANCE	moles H^+ /t	<5	<5	<5	8.0
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	<0.75	<0.75	<0.75
s-Net Acidity without ANCE	%w/w S	<0.005	0.0060	<0.005	0.013

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Net acidity including ANC has a safety factor of 1.5 applied. Neutralising value (NV) of 100% is assumed for liming rate. Based on National acid sulfate soils identification and laboratory methods manual June 2018. The recommendation that the SHCL concentration be multiplied by a factor of 2 to ensure retained acidity is not underestimated, has not been applied in the SHCL results reported.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
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.

Method ID	Methodology Summary
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.
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-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			12/12/2022	1	12/12/2022	12/12/2022		12/12/2022	12/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	104	107
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	104	107
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	133	122
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	124	121
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	83	93
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	90	99
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	87	99
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	101	1	103	100	3	105	108

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	12/12/2022	12/12/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	21	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	21	92	102	10	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	115	112
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	107	109
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	78
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	115	112
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	107	109
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	100	78
Surrogate o-Terphenyl	%		Org-020	88	1	86	83	4	125	91

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/12/2022	11/12/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	21	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	21	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	21	110	100	10	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	21	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	21	95	99	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	90
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	91	86
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	88
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	94
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	100	90
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	96
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	69	74
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	<0.05	<0.05	0	88	96
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	113	1	110	106	4	112	93

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/12/2022	11/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	21	0.4	0.2	67	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.2	0.1	67	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	21	1.0	0.6	50	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	21	0.8	0.6	29	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.6	0.3	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	21	0.7	0.4	55	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	21	1	0.7	35	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	21	0.53	0.4	28	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	21	0.3	0.3	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	21	0.4	0.4	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	21	111	115	4	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	80
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	88	88
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	101	74
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	105	88
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	88
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	107	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	100
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	82
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	96	84
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	82	74
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	110	1	114	98	15	100	89

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/12/2022	11/12/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	21	0.3	0.2	40	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	98	99	1	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	105	104
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	85	80
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	61	94
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	75	106
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	90
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	62	94
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	70	94
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	110	1	114	98	15	100	89

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/12/2022	11/12/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	98	99	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date extracted	-			09/12/2022	1	09/12/2022	09/12/2022		09/12/2022	09/12/2022
Date analysed	-			11/12/2022	1	11/12/2022	11/12/2022		11/12/2022	11/12/2022
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	132	114
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	110	1	114	98	15	100	102

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	09/12/2022	09/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/12/2022	11/12/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	21	98	99	1	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	312652-2
Date prepared	-			12/12/2022	1	12/12/2022	12/12/2022		12/12/2022	12/12/2022
Date analysed	-			14/12/2022	1	14/12/2022	14/12/2022		14/12/2022	14/12/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	107	94
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	101	78
Chromium	mg/kg	1	Metals-020	<1	1	10	10	0	104	84
Copper	mg/kg	1	Metals-020	<1	1	8	7	13	104	98
Lead	mg/kg	1	Metals-020	<1	1	15	14	7	103	89
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	93	90
Nickel	mg/kg	1	Metals-020	<1	1	7	7	0	105	77
Zinc	mg/kg	1	Metals-020	<1	1	26	34	27	101	73
Iron	mg/kg	10	Metals-020	<10	[NT]	[NT]	[NT]	[NT]	112	#

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	12/12/2022	12/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	14/12/2022	14/12/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	21	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	21	13	14	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	21	24	25	4	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	21	53	35	41	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	21	7	9	25	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	21	54	47	14	[NT]	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
Date analysed	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	125	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date prepared	-			13/12/2022	[NT]	[NT]	[NT]	[NT]	13/12/2022	[NT]
Date analysed	-			13/12/2022	[NT]	[NT]	[NT]	[NT]	13/12/2022	[NT]
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	[NT]	[NT]	[NT]	[NT]	96	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
Date analysed	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	[NT]	[NT]	[NT]	[NT]	100	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	124	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate is not possible to report as the high concentration of analytes in sample 312652-25 have caused interference.

PAHs in Soil - The laboratory RPD acceptance criteria has been exceeded for 312652-21. Therefore a triplicate result has been issued as laboratory sample number 312652-21t.

OC's in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in sample 312652-25.

OP's in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in sample 312652-25.

PCBs in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in sample 312652-25.

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 312652-21 for Pb. Therefore a triplicate result has been issued as laboratory sample number 312652-29.
- # Percent recovery is not applicable due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312652-A
Date Sample Received	08/12/2022
Date Instructions Received	13/12/2022
Date Results Expected to be Reported	20/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
Cooling Method	Ice
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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Sample ID	VOCs in soil	On Hold
BH12 -0.1		✓
BH12-0.5		✓
BH12-1		✓
BH12-2		✓
BH12-3		✓
BH12-4		✓
BH12-5		✓
BH12-6		✓
BH12-7		✓
BH12-8		✓
BH15-0.1		✓
BH15-0.5		✓
BH15-1		✓
BH15-2		✓
BH15-3	✓	
BH15-4		✓
BH15-5		✓
BH15-6		✓
BH35-0.5		✓
BH35-0.7		✓
BH36-0.25		✓
BH36-0.4		✓
BH44-0.25	✓	
BH44-0.35		✓
BH45-0.2	✓	
BH45-0.5		✓
DUP04		✓
BH10-0.1		✓
BH36 - [TRIPLICATE]-0.25		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 13 December 2022 12:55 PM
To: Samplereceipt; Login
Cc: Dean Stafford
Subject: 22038 - Additional Analysis

Ref: 312652-A
TAT: Standard.
Due: 20.12.2022
MT.

Categories: Additional

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please schedule the following analysis for the project 22038:

- VOC
  - BH07 - 1.0 312405-25
  - BH09 - 0.5 312491-2
  - BH15 - 3.0 312652-15
  - BH38 - 0.4 312813-21
  - BH40 - 0.25 312813-24
  - BH44 - 0.25 312652-23
  - BH45 - 0.2 312652-25
- Combo 6a
  - SS01 312813-42

Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
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REDITUS

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CERTIFICATE OF ANALYSIS 312652-A

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	08/12/2022
Date completed instructions received	13/12/2022

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

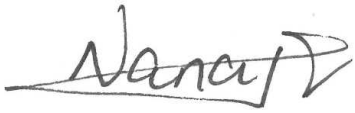
Date results requested by	20/12/2022
Date of Issue	20/12/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil				
Our Reference		312652-A-15	312652-A-23	312652-A-25
Your Reference	UNITS	BH15	BH44	BH45
Depth		3	0.25	0.2
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Date extracted	-	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022
Dichlorodifluoromethane	mg/kg	<1	<1	<1
Chloromethane	mg/kg	<1	<1	<1
Vinyl Chloride	mg/kg	<1	<1	<1
Bromomethane	mg/kg	<1	<1	<1
Chloroethane	mg/kg	<1	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1	<1
1,1-dichloroethane	mg/kg	<1	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1	<1
bromochloromethane	mg/kg	<1	<1	<1
chloroform	mg/kg	<1	<1	<1
2,2-dichloropropane	mg/kg	<1	<1	<1
1,2-dichloroethane	mg/kg	<1	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1	<1
1,1-dichloropropene	mg/kg	<1	<1	<1
Cyclohexane	mg/kg	<1	<1	<1
carbon tetrachloride	mg/kg	<1	<1	<1
Benzene	mg/kg	<0.2	<0.2	<0.2
dibromomethane	mg/kg	<1	<1	<1
1,2-dichloropropane	mg/kg	<1	<1	<1
trichloroethene	mg/kg	<1	<1	<1
bromodichloromethane	mg/kg	<1	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1	<1
Toluene	mg/kg	<0.5	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1	<1
dibromochloromethane	mg/kg	<1	<1	<1
1,2-dibromoethane	mg/kg	<1	<1	<1
tetrachloroethene	mg/kg	<1	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1	<1
chlorobenzene	mg/kg	<1	<1	<1

VOCs in soil				
Our Reference		312652-A-15	312652-A-23	312652-A-25
Your Reference	UNITS	BH15	BH44	BH45
Depth		3	0.25	0.2
Date Sampled		07/12/22	07/12/22	07/12/22
Type of sample		Soil	Soil	Soil
Ethylbenzene	mg/kg	<1	<1	<1
bromoform	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
styrene	mg/kg	<1	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1	<1
o-Xylene	mg/kg	<1	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1	<1
isopropylbenzene	mg/kg	<1	<1	<1
bromobenzene	mg/kg	<1	<1	<1
n-propyl benzene	mg/kg	<1	<1	<1
2-chlorotoluene	mg/kg	<1	<1	<1
4-chlorotoluene	mg/kg	<1	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1	<1
tert-butyl benzene	mg/kg	<1	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1	<1
sec-butyl benzene	mg/kg	<1	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1	<1
4-isopropyl toluene	mg/kg	<1	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1	<1
n-butyl benzene	mg/kg	<1	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1	<1
hexachlorobutadiene	mg/kg	<1	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1	<1
Surrogate Dibromofluorometha	%	106	105	105
Surrogate aaa-Trifluorotoluene	%	116	112	123
Surrogate Toluene-d_8	%	102	102	102
Surrogate 4-Bromofluorobenzene	%	96	94	92

Moisture		
Our Reference		312652-A-15
Your Reference	UNITS	BH15
Depth		3
Date Sampled		07/12/22
Type of sample		Soil
Date prepared	-	14/12/2022
Date analysed	-	15/12/2022
Moisture	%	5.1

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	312652-A-25
Date extracted	-			14/12/2022	23	14/12/2022	14/12/2022		14/12/2022	14/12/2022
Date analysed	-			19/12/2022	23	19/12/2022	19/12/2022		19/12/2022	19/12/2022
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	113	110
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	23	<1	<1	0	121	122
2,2-dichloropropane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	116	120
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	119	117
1,1-dichloropropene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	23	<0.2	<0.2	0	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	23	<1	<1	0	112	107
bromodichloromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	121	116
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	23	<0.5	<0.5	0	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	23	<1	<1	0	128	123
1,2-dibromoethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	23	<1	<1	0	120	105
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	23	<2	<2	0	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	312652-A-25
o-Xylene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	23	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	107	23	105	106	1	104	104
Surrogate aaa-Trifluorotoluene	%		Org-023	129	23	112	112	0	116	117
Surrogate Toluene-d_8	%		Org-023	102	23	102	102	0	101	101
Surrogate 4-Bromofluorobenzene	%		Org-023	95	23	94	94	0	98	96

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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312652-B
Date Sample Received	08/12/2022
Date Instructions Received	20/12/2022
Date Results Expected to be Reported	05/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Holding time exceedance: PAH

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

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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12 Ashley St Chatswood NSW 2067
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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(b)k)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	On Hold
BH12 -0.1																						✓
BH12-0.5																						✓
BH12-1																						✓
BH12-2																						✓
BH12-3																						✓
BH12-4																						✓
BH12-5																						✓
BH12-6																						✓
BH12-7																						✓
BH12-8																						✓
BH15-0.1																						✓
BH15-0.5																						✓
BH15-1																						✓
BH15-2																						✓
BH15-3																						✓
BH15-4																						✓
BH15-5																						✓
BH15-6																						✓
BH35-0.5																						✓
BH35-0.7																						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	On Hold
BH36-0.25																						✓
BH36-0.4																						✓
BH44-0.25																						✓
BH44-0.35																						✓
BH45-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH45-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
DUP04																						✓
BH10-0.1																						✓
BH36 - [TRIPLICATE]-0.25																						✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 20 December 2022 6:02 PM
To: Login; Samplereceipt
Cc: Dean Stafford
Subject: 22038 - Further analysis

Ref: 312652-B.
TAT: Standard
Due: 05/01/2023
MT.

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please have the following further analysis for samples from the project 22038 on standard TAT:

- TCLP - Benzo(a)pyrene
  - BH02 - 0.1
  - BH08 - 0.1
  - BH11 - 0.1
  - BH29 - 0.4
  - BH30 - 0.1
  - BH38 - 0.15
  - BH38 - 0.4
  - BH40 - 0.25
  - BH40 - 0.5
  - BH45 - 0.2 312652-25
  - BH45 - 0.5 312652-26.
- TCLP - Lead
  - BH27 - 0.1
- TCLP - Nickel
  - BH05 - 0.1
  - BH14 - 0.5
  - BH32 - 0.1

Any questions please let me know
Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
+61 408 988 954

REDITUS

www.reditus.com.au

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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 312652-B

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	08/12/2022
Date completed instructions received	20/12/2022

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	05/01/2023
Date of Issue	05/01/2023

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Josh Williams, Organics and LC Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

PAHs in TCLP (USEPA 1311)			
Our Reference		312652-B-25	312652-B-26
Your Reference	UNITS	BH45	BH45
Depth		0.2	0.5
Date Sampled		07/12/22	07/12/22
Type of sample		Soil	Soil
pH of soil for fluid# determ.	pH units	9.6	9.1
pH of soil TCLP (after HCl)	pH units	1.7	1.7
Extraction fluid used		1	1
pH of final Leachate	pH units	5.2	5.0
Date extracted	-	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022
Naphthalene in TCLP	mg/L	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001
Acenaphthene in TCLP	mg/L	0.002	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001
Phenanthrene in TCLP	mg/L	0.005	<0.001
Anthracene in TCLP	mg/L	0.003	<0.001
Fluoranthene in TCLP	mg/L	0.003	<0.001
Pyrene in TCLP	mg/L	0.002	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001
Total +ve PAH's	mg/L	0.015	NIL (+)VE
Surrogate p-Terphenyl-d14	%	79	83

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	87	[NT]	[NT]	[NT]	[NT]	85	[NT]

Result Definitions

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RPD	Relative Percent Difference
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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.

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For VOCs in water samples, three vials are required for duplicate or spike analysis.

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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.

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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.

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Measurement Uncertainty estimates are available for most tests upon request.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Dean Stafford

Sample Login Details

Your reference	22038
Envirolab Reference	312813
Date Sample Received	09/12/2022
Date Instructions Received	12/12/2022
Date Results Expected to be Reported	19/12/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	42 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Extra samples received:
BH01/0.1
BH01/0.5
BH01/1.1
BH01/2.0
BH01/3.0
BH02/0.1
BH02/0.5
BH02/1.0
BH02/2.0
BH02/3.0
BH02/4.0
BH40/0.1

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**

Asbestos #2,18,24 - sub from jars, as water in the bags

Analysis Underway, details on the following page:

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Sample ID	VOCs in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	Chromium Suite	On Hold
BH11-0.1		✓	✓	✓	✓	✓	✓	✓	✓			
BH28-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH28-1		✓	✓	✓	✓	✓	✓	✓				
BH28-2												✓
BH28-3											✓	
BH28-4											✓	
BH28-5												✓
BH28-6												✓
BH31-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH31-1												✓
BH31-2												✓
BH31-3		✓	✓	✓	✓	✓	✓	✓				
BH31-4											✓	
BH31-5											✓	
BH32-0.1		✓	✓	✓	✓	✓	✓	✓	✓			
BH32-0.3										✓		
BH32-0.4		✓	✓	✓	✓	✓	✓	✓				
BH37-0.2		✓	✓	✓	✓	✓	✓	✓	✓			
BH37-0.35		✓	✓	✓	✓	✓	✓	✓				
BH38-0.15		✓	✓	✓	✓	✓	✓	✓	✓			
BH38-0.4	✓	✓	✓	✓	✓	✓	✓	✓		✓		
BH39-0.3		✓	✓	✓	✓	✓	✓	✓	✓			
BH39-0.5												✓
BH40-0.25		✓	✓	✓	✓	✓	✓	✓	✓			
BH40-0.5		✓	✓	✓	✓	✓	✓	✓				
BH41-0.25		✓	✓	✓	✓	✓	✓	✓	✓			
BH41-0.4		✓	✓	✓	✓	✓	✓	✓				
BH46-0.25		✓	✓	✓	✓	✓	✓	✓	✓			
BH46-0.4		✓	✓	✓	✓	✓	✓	✓				
BH01-0.1												✓
BH01-0.5												✓
BH01-1.1												✓

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Sample ID	VOCs in soil	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	Asbestos ID - soils	PFAS in Soils Extended	Chromium Suite	On Hold
BH01-2.0												✓
BH01-3.0												✓
BH02-0.1												✓
BH02-0.5												✓
BH02-1.0												✓
BH02-2.0												✓
BH02-3.0												✓
BH02-4.0												✓
BH40-0.1												✓
SS1												✓

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.

CHAIN OF CUSTODY FORM - Client

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Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
P 08 8967 1201 | E darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No.:
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Date results required: Standard Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 155 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample Information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	Interpretive Characterisation	Chromium Reducible Suite									Provide as much information about the sample as you can
1	BH11	0.1	9/12/2022	Soil		x														
2	BH28	0.5	9/12/2022	Soil		x		x												
3	BH26	1	9/12/2022	Soil			x													
4	BH26	2	9/12/2022	Soil	x															
5	BH28	3	9/12/2022	Soil							x									
6	BH28	4	9/12/2022	Soil							x									
7	BH28	5	9/12/2022	Soil	x															
8	BH28	6	9/12/2022	Soil	x															
9	BH31	0.5	9/12/2022	Soil		x		x												
10	BH31	1	9/12/2022	Soil	x															
11	BH31	2	9/12/2022	Soil	x															
12	BH31	3	9/12/2022	Soil			x													
13	BH31	4	9/12/2022	Soil							x									
14	BH31	5	9/12/2022	Soil							x									
15	BH32	0.1	9/12/2022	Soil		x														
16	BH32	0.3	9/12/2022	Soil				x												
17	BH32	0.4	9/12/2022	Soil			x													
18	BH37	0.2	9/12/2022	Soil		x														
19	BH37	0.35	9/12/2022	Soil			x													
20	BH38	0.15	9/12/2022	Soil		x														
21	BH38	0.4	9/12/2022	Soil			x	x	x											
22	BH39	0.3	9/12/2022	Soil		x														
23	BH39	0.5	9/12/2022	Soil	x															
24	BH40	0.25	9/12/2022	Soil		x														
25	BH40	0.5	9/12/2022	Soil			x													
26	BH41	0.25	9/12/2022	Soil		x														
27	BH41	0.4	9/12/2022	Soil			x													
28	BH46	0.25	9/12/2022	Soil		x														
29	BH46	0.4	9/12/2022	Soil			x													

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company):	*Lab Use Only*	
Print Name: Jack Palma	Print Name:	Job number:	Cooling: Ice / Ice pack / None
Date & Time: 9/12/2022	Date & Time: 9/12/22 16:10	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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Darwin Office - Envirolab Services
Unit 20/119 Reichardt Road, Winnellie, NT 0820
08 8967 1201 | darwin@envirolab.com.au

Company:		Client Project Name/Number/Site etc (ie report title):	
Contact Person:			
Project Mgr:		PO No. (if applicable):	
Sampler:		Envirolab Quote No. :	
Address:		Date results required:	
		Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:	Mob:	*Note: Inform lab in advance if urgent turnaround is required - surcharges apply*	
Email Results to:		Additional report format: ☐ Esdat ☐ Equis	
Email Invoice to:		Lab Comments:	

Sample Information					Tests Required	Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample		Provide as much information about the sample as you can
30	BH01	0-1				
31	↓	0.5				
32		1.1				
33	↓	2.0				
34		3.0				
35	BH02	0.1				
36	↑	0.5				
37	↓	1.0				
38		2.0				
39		3.0				
40	↓	4.0				

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company):	Received by (Company):	*Lab Use Only*	
Print Name:	Print Name:	Job number: 312813	Cooling: Ice / Ice pack / None
Date & Time:	Date & Time:	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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Company:		Client Project Name/Number/Site etc (ie report title):	
Contact Person:			
Project Mgr:		PO No. (if applicable):	
Sampler:		Envirolab Quote No. :	
Address:		Date results required:	
		Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:	Mob:	*Note: Inform lab in advance if urgent turnaround is required - surcharges apply*	
Email Results to:		Additional report format: ☐ Esdat ☐ Equis	
Email Invoice to:		Lab Comments:	

Sample Information					Tests Required															Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample																Provide as much information about the sample as you can
	41 BH10	0.1																		
	42 SS1																			

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company):	Received by (Company):	*Lab Use Only*	
Print Name:	Print Name:	Job number:	Cooling: Ice / Ice pack / None
Date & Time:	Date & Time:	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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Company:	Reditus	Client Project Name/Number/Site etc (ie report title):	22038
Contact Person:	Zach Palma		
Project Mgr:		PO No. (if applicable):	
Sampler:		Envirolab Quote No.:	
Address:		Date results required:	
		Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:	Mob:	*Note: Inform lab in advance if urgent turnaround is required - surcharges apply*	
Email Results to:		Additional report format: ☐ Esdat ☐ Equis	
Email Invoice to:		Lab Comments: 4 esdats	

Sample Information					Tests Required														Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample															Provide as much information about the sample as you can

COC to be emailed ✓ 7pm ☺ Thanks

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company):	Received by (Company):	*Lab Use Only*	
Print Name:	Print Name:	Job number:	Cooling: Ice / Ice pack / None
Date & Time:	Date & Time:	Temperature:	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

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CERTIFICATE OF ANALYSIS 312813

Client Details

Client	Reditus Consulting
Attention	Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	42 Soil
Date samples received	09/12/2022
Date completed instructions received	12/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	19/12/2022
Date of Issue	19/12/2022

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Hannah Nguyen, Metals Supervisor
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader
Lucy Zhu, Asbestos Supervisor
Nick Sarlamis, Assistant Operation Manager
Phalak Inthakesone, Organics Development Manager, Sydney

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil			
Our Reference		312813-21	312813-24
Your Reference	UNITS	BH38	BH40
Depth		0.4	0.25
Date Sampled		9/12/2022	9/12/2022
Type of sample		Soil	Soil
Date extracted	-	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	13/12/2022
Dichlorodifluoromethane	mg/kg	<1	<1
Chloromethane	mg/kg	<1	<1
Vinyl Chloride	mg/kg	<1	<1
Bromomethane	mg/kg	<1	<1
Chloroethane	mg/kg	<1	<1
Trichlorofluoromethane	mg/kg	<1	<1
1,1-Dichloroethene	mg/kg	<1	<1
trans-1,2-dichloroethene	mg/kg	<1	<1
1,1-dichloroethane	mg/kg	<1	<1
cis-1,2-dichloroethene	mg/kg	<1	<1
bromochloromethane	mg/kg	<1	<1
chloroform	mg/kg	<1	<1
2,2-dichloropropane	mg/kg	<1	<1
1,2-dichloroethane	mg/kg	<1	<1
1,1,1-trichloroethane	mg/kg	<1	<1
1,1-dichloropropene	mg/kg	<1	<1
Cyclohexane	mg/kg	<1	<1
carbon tetrachloride	mg/kg	<1	<1
Benzene	mg/kg	<0.2	<0.2
dibromomethane	mg/kg	<1	<1
1,2-dichloropropane	mg/kg	<1	<1
trichloroethene	mg/kg	<1	<1
bromodichloromethane	mg/kg	<1	<1
trans-1,3-dichloropropene	mg/kg	<1	<1
cis-1,3-dichloropropene	mg/kg	<1	<1
1,1,2-trichloroethane	mg/kg	<1	<1
Toluene	mg/kg	<0.5	<0.5
1,3-dichloropropane	mg/kg	<1	<1
dibromochloromethane	mg/kg	<1	<1
1,2-dibromoethane	mg/kg	<1	<1
tetrachloroethene	mg/kg	<1	<1
1,1,1,2-tetrachloroethane	mg/kg	<1	<1
chlorobenzene	mg/kg	<1	<1

VOCs in soil			
Our Reference		312813-21	312813-24
Your Reference	UNITS	BH38	BH40
Depth		0.4	0.25
Date Sampled		9/12/2022	9/12/2022
Type of sample		Soil	Soil
Ethylbenzene	mg/kg	<1	<1
bromoform	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
styrene	mg/kg	<1	<1
1,1,2,2-tetrachloroethane	mg/kg	<1	<1
o-Xylene	mg/kg	<1	<1
1,2,3-trichloropropane	mg/kg	<1	<1
isopropylbenzene	mg/kg	<1	<1
bromobenzene	mg/kg	<1	<1
n-propyl benzene	mg/kg	<1	<1
2-chlorotoluene	mg/kg	<1	<1
4-chlorotoluene	mg/kg	<1	<1
1,3,5-trimethyl benzene	mg/kg	<1	<1
tert-butyl benzene	mg/kg	<1	<1
1,2,4-trimethyl benzene	mg/kg	<1	<1
1,3-dichlorobenzene	mg/kg	<1	<1
sec-butyl benzene	mg/kg	<1	<1
1,4-dichlorobenzene	mg/kg	<1	<1
4-isopropyl toluene	mg/kg	<1	<1
1,2-dichlorobenzene	mg/kg	<1	<1
n-butyl benzene	mg/kg	<1	<1
1,2-dibromo-3-chloropropane	mg/kg	<1	<1
1,2,4-trichlorobenzene	mg/kg	<1	<1
hexachlorobutadiene	mg/kg	<1	<1
1,2,3-trichlorobenzene	mg/kg	<1	<1
Surrogate Dibromofluorometha	%	103	99
Surrogate aaa-Trifluorotoluene	%	97	120
Surrogate Toluene-d_8	%	100	103
Surrogate 4-Bromofluorobenzene	%	95	107

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312813-1	312813-2	312813-3	312813-9	312813-12
Your Reference	UNITS	BH11	BH28	BH28	BH31	BH31
Depth		0.1	0.5	1	0.5	3
Date Sampled		9/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	97	96	103	95

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312813-15	312813-17	312813-18	312813-19	312813-20
Your Reference	UNITS	BH32	BH32	BH37	BH37	BH38
Depth		0.1	0.4	0.2	0.35	0.15
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	93	100	98	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312813-21	312813-22	312813-24	312813-25	312813-26
Your Reference	UNITS	BH38	BH39	BH40	BH40	BH41
Depth		0.4	0.3	0.25	0.5	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	93	96	120	94	110

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		312813-27	312813-28	312813-29	312813-30	312813-32
Your Reference	UNITS	BH41	BH29	BH29	BH01	BH01
Depth		0.4	0.25	0.4	0.1	1.1
Date Sampled		9/12/2022	9/12/2022	9/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	13/12/2022	13/12/2022	13/12/2022	16/12/2022	16/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	105	108	133	127

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		312813-35	312813-37	312813-42
Your Reference	UNITS	BH02	BH02	SS1
Depth		0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022
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	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	135	126	129

svTRH (C10-C40) in Soil						
Our Reference		312813-1	312813-2	312813-3	312813-9	312813-12
Your Reference	UNITS	BH11	BH28	BH28	BH31	BH31
Depth		0.1	0.5	1	0.5	3
Date Sampled		9/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	140	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	140	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	180	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	270	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	450	<50	<50	<50	<50
Surrogate o-Terphenyl	%	93	86	89	87	90

svTRH (C10-C40) in Soil						
Our Reference		312813-15	312813-17	312813-18	312813-19	312813-20
Your Reference	UNITS	BH32	BH32	BH37	BH37	BH38
Depth		0.1	0.4	0.2	0.35	0.15
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	140
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	7,700
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	5,300
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	13,000
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	360
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	360
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	12,000
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	2,700
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	15,000
Surrogate o-Terphenyl	%	90	89	90	89	#

svTRH (C10-C40) in Soil						
Our Reference		312813-21	312813-22	312813-24	312813-25	312813-26
Your Reference	UNITS	BH38	BH39	BH40	BH40	BH41
Depth		0.4	0.3	0.25	0.5	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	120	<50	<50
TRH C_{15} - C_{28}	mg/kg	450	<100	4,100	260	<100
TRH C_{29} - C_{36}	mg/kg	260	<100	2,200	190	<100
Total +ve TRH (C10-C36)	mg/kg	710	<50	6,400	450	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	220	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	220	<50	<50
TRH >C_{16} -C_{34}	mg/kg	670	<100	5,900	400	<100
TRH >C_{34} -C_{40}	mg/kg	110	<100	910	110	<100
Total +ve TRH (>C10-C40)	mg/kg	780	<50	7,000	510	<50
Surrogate o-Terphenyl	%	114	88	#	93	88

svTRH (C10-C40) in Soil						
Our Reference		312813-27	312813-28	312813-29	312813-30	312813-32
Your Reference	UNITS	BH41	BH29	BH29	BH01	BH01
Depth		0.4	0.25	0.4	0.1	1.1
Date Sampled		9/12/2022	9/12/2022	9/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022	16/12/2022	16/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	85	86	86	88

svTRH (C10-C40) in Soil				
Our Reference		312813-35	312813-37	312813-42
Your Reference	UNITS	BH02	BH02	SS1
Depth		0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022
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
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
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	%	88	94	100

PAHs in Soil						
Our Reference		312813-1	312813-2	312813-3	312813-9	312813-12
Your Reference	UNITS	BH11	BH28	BH28	BH31	BH31
Depth		0.1	0.5	1	0.5	3
Date Sampled		9/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.3	<0.1	<0.1	0.1	<0.1
Pyrene	mg/kg	0.5	<0.1	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.3	<0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	0.3	<0.1	<0.1	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.7	<0.2	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.82	0.1	<0.05	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.6	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	3.7	0.1	<0.05	1.0	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.0	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.1	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	88	87	84	88

PAHs in Soil						
Our Reference		312813-15	312813-17	312813-18	312813-19	312813-20
Your Reference	UNITS	BH32	BH32	BH37	BH37	BH38
Depth		0.1	0.4	0.2	0.35	0.15
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	3.4
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	8.0
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	4.8
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	190
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	50
Fluoranthene	mg/kg	0.2	0.1	<0.1	<0.1	300
Pyrene	mg/kg	0.2	0.2	<0.1	<0.1	300
Benzo(a)anthracene	mg/kg	0.2	0.1	<0.1	<0.1	210
Chrysene	mg/kg	0.1	0.1	<0.1	<0.1	130
Benzo(b,j+k)fluoranthene	mg/kg	0.2	0.3	<0.2	<0.2	310
Benzo(a)pyrene	mg/kg	0.2	0.2	<0.05	<0.05	250
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	100
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	22
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	61
Total +ve PAH's	mg/kg	1.1	1.0	<0.05	<0.05	1,900
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	340
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	340
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	340
Surrogate p-Terphenyl-d14	%	87	82	82	85	110

PAHs in Soil						
Our Reference		312813-21	312813-22	312813-24	312813-25	312813-26
Your Reference	UNITS	BH38	BH39	BH40	BH40	BH41
Depth		0.4	0.3	0.25	0.5	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<1	<0.1	<0.1
Acenaphthylene	mg/kg	0.2	<0.1	2.2	0.2	<0.1
Acenaphthene	mg/kg	0.4	<0.1	4.3	0.2	<0.1
Fluorene	mg/kg	0.2	<0.1	1.3	<0.1	<0.1
Phenanthrene	mg/kg	16	<0.1	200	14	<0.1
Anthracene	mg/kg	3.2	<0.1	60	4.3	<0.1
Fluoranthene	mg/kg	23	<0.1	220	18	0.1
Pyrene	mg/kg	22	<0.1	190	16	0.1
Benzo(a)anthracene	mg/kg	9.8	<0.1	130	7.1	0.1
Chrysene	mg/kg	9.7	<0.1	86	7.4	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	14	<0.2	160	9.8	0.2
Benzo(a)pyrene	mg/kg	7.8	0.07	140	5.5	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	3.5	<0.1	48	2.5	<0.1
Dibenzo(a,h)anthracene	mg/kg	1.0	<0.1	9.3	0.5	<0.1
Benzo(g,h,i)perylene	mg/kg	4.4	<0.1	25	3.2	<0.1
Total +ve PAH's	mg/kg	120	0.07	1,300	89	0.78
Benzo(a)pyrene TEQ calc (zero)	mg/kg	12	<0.5	180	8.1	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	12	<0.5	180	8.1	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	12	<0.5	180	8.1	<0.5
Surrogate p-Terphenyl-d14	%	95	91	110	94	91

PAHs in Soil						
Our Reference		312813-27	312813-28	312813-29	312813-30	312813-32
Your Reference	UNITS	BH41	BH29	BH29	BH01	BH01
Depth		0.4	0.25	0.4	0.1	1.1
Date Sampled		9/12/2022	9/12/2022	9/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.1	0.4	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.1	0.5	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	0.6	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.4	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	0.9	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.2	0.92	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.74	4.2	0.1	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	1.1	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	1.1	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	1.2	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	102	94	92	95	96

PAHs in Soil				
Our Reference		312813-35	312813-37	312813-42
Your Reference	UNITS	BH02	BH02	SS1
Depth		0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.2	<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	1.6	<0.1	<0.1
Anthracene	mg/kg	0.5	<0.1	<0.1
Fluoranthene	mg/kg	2.6	<0.1	<0.1
Pyrene	mg/kg	2.6	<0.1	<0.1
Benzo(a)anthracene	mg/kg	1.8	<0.1	<0.1
Chrysene	mg/kg	1.4	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	2.7	<0.2	<0.2
Benzo(a)pyrene	mg/kg	2.6	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	1.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.8	<0.1	<0.1
Total +ve PAH's	mg/kg	18	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	3.3	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	3.3	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	3.3	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	91	96	93

Organochlorine Pesticides in soil						
Our Reference		312813-1	312813-2	312813-9	312813-15	312813-18
Your Reference	UNITS	BH11	BH28	BH31	BH32	BH37
Depth		0.1	0.5	0.5	0.1	0.2
Date Sampled		9/12/2022	8/12/2022	8/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	92	91	95	83

Organochlorine Pesticides in soil						
Our Reference		312813-20	312813-22	312813-24	312813-26	312813-28
Your Reference	UNITS	BH38	BH39	BH40	BH41	BH29
Depth		0.15	0.3	0.25	0.25	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
alpha-BHC	mg/kg	<1	<0.1	<1	<0.1	<0.1
HCB	mg/kg	<1	<0.1	<1	<0.1	<0.1
beta-BHC	mg/kg	<1	<0.1	<1	<0.1	<0.1
gamma-BHC	mg/kg	<1	<0.1	<1	<0.1	<0.1
Heptachlor	mg/kg	<1	<0.1	<1	<0.1	<0.1
delta-BHC	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aldrin	mg/kg	<1	<0.1	<1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<1	<0.1	<1	<0.1	<0.1
gamma-Chlordane	mg/kg	<1	<0.1	<1	<0.1	<0.1
alpha-chlordane	mg/kg	<1	<0.1	<1	<0.1	<0.1
Endosulfan I	mg/kg	<1	<0.1	<1	<0.1	<0.1
pp-DDE	mg/kg	<1	<0.1	<1	<0.1	<0.1
Dieldrin	mg/kg	<1	<0.1	<1	<0.1	<0.1
Endrin	mg/kg	<1	<0.1	<1	<0.1	<0.1
Endosulfan II	mg/kg	<1	<0.1	<1	<0.1	<0.1
pp-DDD	mg/kg	<1	<0.1	<1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<1	<0.1	<1	<0.1	<0.1
pp-DDT	mg/kg	<1	<0.1	<1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<1	<0.1	<1	<0.1	<0.1
Methoxychlor	mg/kg	<1	<0.1	<1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	98	110	96	103

Organochlorine Pesticides in soil						
Our Reference		312813-30	312813-32	312813-35	312813-37	312813-42
Your Reference	UNITS	BH01	BH01	BH02	BH02	SS1
Depth		0.1	1.1	0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	105	99	103	103

Organophosphorus Pesticides in Soil						
Our Reference		312813-1	312813-2	312813-9	312813-15	312813-18
Your Reference	UNITS	BH11	BH28	BH31	BH32	BH37
Depth		0.1	0.5	0.5	0.1	0.2
Date Sampled		9/12/2022	8/12/2022	8/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	92	91	95	83

Organophosphorus Pesticides in Soil						
Our Reference		312813-20	312813-22	312813-24	312813-26	312813-28
Your Reference	UNITS	BH38	BH39	BH40	BH41	BH29
Depth		0.15	0.3	0.25	0.25	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Dichlorvos	mg/kg	<1	<0.1	<1	<0.1	<0.1
Dimethoate	mg/kg	<1	<0.1	<1	<0.1	<0.1
Diazinon	mg/kg	<1	<0.1	<1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<1	<0.1	<1	<0.1	<0.1
Ronnel	mg/kg	<1	<0.1	<1	<0.1	<0.1
Fenitrothion	mg/kg	<1	<0.1	<1	<0.1	<0.1
Malathion	mg/kg	<1	<0.1	<1	<0.1	<0.1
Chlorpyriphos	mg/kg	<1	<0.1	<1	<0.1	<0.1
Parathion	mg/kg	<1	<0.1	<1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<1	<0.1	<1	<0.1	<0.1
Ethion	mg/kg	<1	<0.1	<1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<1	<0.1	<1	<0.1	<0.1
Surrogate TCMX	%	100	98	110	96	103

Organophosphorus Pesticides in Soil						
Our Reference		312813-30	312813-32	312813-35	312813-37	312813-42
Your Reference	UNITS	BH01	BH01	BH02	BH02	SS1
Depth		0.1	1.1	0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	105	99	103	103

PCBs in Soil						
Our Reference		312813-1	312813-2	312813-9	312813-15	312813-18
Your Reference	UNITS	BH11	BH28	BH31	BH32	BH37
Depth		0.1	0.5	0.5	0.1	0.2
Date Sampled		9/12/2022	8/12/2022	8/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	92	91	95	83

PCBs in Soil						
Our Reference		312813-20	312813-22	312813-24	312813-26	312813-28
Your Reference	UNITS	BH38	BH39	BH40	BH41	BH29
Depth		0.15	0.3	0.25	0.25	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Aroclor 1016	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1221	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1232	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1242	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1248	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1254	mg/kg	<1	<0.1	<1	<0.1	<0.1
Aroclor 1260	mg/kg	<1	<0.1	<1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	100	98	110	96	103

PCBs in Soil						
Our Reference		312813-30	312813-32	312813-35	312813-37	312813-42
Your Reference	UNITS	BH01	BH01	BH02	BH02	SS1
Depth		0.1	1.1	0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	104	105	99	103	103

Acid Extractable metals in soil						
Our Reference		312813-1	312813-2	312813-3	312813-9	312813-12
Your Reference	UNITS	BH11	BH28	BH28	BH31	BH31
Depth		0.1	0.5	1	0.5	3
Date Sampled		9/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Arsenic	mg/kg	<4	8	7	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	10	6	12	19
Copper	mg/kg	54	23	27	13	16
Lead	mg/kg	17	18	11	25	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	4	5	7	3
Zinc	mg/kg	43	16	49	32	11

Acid Extractable metals in soil						
Our Reference		312813-15	312813-17	312813-18	312813-19	312813-20
Your Reference	UNITS	BH32	BH32	BH37	BH37	BH38
Depth		0.1	0.4	0.2	0.35	0.15
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Arsenic	mg/kg	<4	4	<4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	21	7	21	3
Copper	mg/kg	36	18	5	11	3
Lead	mg/kg	3	21	4	14	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	67	13	7	4	2
Zinc	mg/kg	34	41	7	8	10

Acid Extractable metals in soil						
Our Reference		312813-21	312813-22	312813-24	312813-25	312813-26
Your Reference	UNITS	BH38	BH39	BH40	BH40	BH41
Depth		0.4	0.3	0.25	0.5	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Arsenic	mg/kg	5	4	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	13	3	24	22
Copper	mg/kg	13	27	42	14	30
Lead	mg/kg	13	20	1	16	24
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	7	24	10	24
Zinc	mg/kg	5	24	15	19	42

Acid Extractable metals in soil						
Our Reference		312813-27	312813-28	312813-29	312813-30	312813-32
Your Reference	UNITS	BH41	BH29	BH29	BH01	BH01
Depth		0.4	0.25	0.4	0.1	1.1
Date Sampled		9/12/2022	9/12/2022	9/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Arsenic	mg/kg	6	<4	4	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	11	6	15	25
Copper	mg/kg	21	32	28	33	19
Lead	mg/kg	23	23	13	24	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	13	5	17	8
Zinc	mg/kg	59	28	21	35	39
Iron	mg/kg	[NA]	[NA]	[NA]	[NA]	57,000

Acid Extractable metals in soil					
Our Reference		312813-35	312813-37	312813-42	312813-43
Your Reference	UNITS	BH02	BH02	SS1	BH11 - [TRIPLICATE]
Depth		0.1	1.0	-	0.1
Date Sampled		08/12/2022	08/12/2022	08/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	15/12/2022	15/12/2022	15/12/2022	15/12/2022
Arsenic	mg/kg	<4	7	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	22	18	8
Copper	mg/kg	34	19	9	24
Lead	mg/kg	55	23	15	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	7	2	6
Zinc	mg/kg	59	14	8	26

Moisture						
Our Reference		312813-1	312813-2	312813-3	312813-9	312813-12
Your Reference	UNITS	BH11	BH28	BH28	BH31	BH31
Depth		0.1	0.5	1	0.5	3
Date Sampled		9/12/2022	8/12/2022	8/12/2022	8/12/2022	8/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Moisture	%	9.0	13	9.4	4.3	15

Moisture						
Our Reference		312813-15	312813-16	312813-17	312813-18	312813-19
Your Reference	UNITS	BH32	BH32	BH32	BH37	BH37
Depth		0.1	0.3	0.4	0.2	0.35
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Moisture	%	5.4	8.2	13	3.7	17

Moisture						
Our Reference		312813-20	312813-21	312813-22	312813-24	312813-25
Your Reference	UNITS	BH38	BH38	BH39	BH40	BH40
Depth		0.15	0.4	0.3	0.25	0.5
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Moisture	%	0.4	16	14	0.7	14

Moisture						
Our Reference		312813-26	312813-27	312813-28	312813-29	312813-30
Your Reference	UNITS	BH41	BH41	BH29	BH29	BH01
Depth		0.25	0.4	0.25	0.4	0.1
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Moisture	%	8.4	16	12	8.9	14

Moisture					
Our Reference		312813-32	312813-35	312813-37	312813-42
Your Reference	UNITS	BH01	BH02	BH02	SS1
Depth		1.1	0.1	1.0	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	13/12/2022	13/12/2022	13/12/2022	13/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Moisture	%	27	14	25	9.9

Asbestos ID - soils						
Our Reference		312813-1	312813-2	312813-9	312813-15	312813-18
Your Reference	UNITS	BH11	BH28	BH31	BH32	BH37
Depth		0.1	0.5	0.5	0.1	0.2
Date Sampled		9/12/2022	8/12/2022	8/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Sample mass tested	g	Approx. 60g	Approx. 35g	Approx. 65g	Approx. 75g	Approx. 55g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown fine-grained soil and rocks	Brown coarse-grained soil and rocks	Brown sandy soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		312813-20	312813-22	312813-24	312813-26	312813-28
Your Reference	UNITS	BH38	BH39	BH40	BH41	BH29
Depth		0.15	0.3	0.25	0.25	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Sample mass tested	g	Approx. 60g	Approx. 60g	Approx. 45g	Approx. 50g	Approx. 90g
Sample Description	-	Black bituminous soil	Brown coarse-grained soil and rocks	Grey coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils				
Our Reference		312813-30	312813-35	312813-42
Your Reference	UNITS	BH01	BH02	SS1
Depth		0.1	0.1	-
Date Sampled		08/12/2022	08/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil
Date analysed	-	16/12/2022	16/12/2022	16/12/2022
Sample mass tested	g	Approx. 50g	Approx. 50g	Approx. 60g
Sample Description	-	Brown coarse-grained soil and rocks	Brown coarse-grained soil and rocks	Red coarse-grained soil and rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

PFAS in Soils Extended						
Our Reference		312813-2	312813-9	312813-16	312813-21	312813-35
Your Reference	UNITS	BH28	BH31	BH32	BH38	BH02
Depth		0.5	0.5	0.3	0.4	0.1
Date Sampled		8/12/2022	8/12/2022	9/12/2022	9/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Date analysed	-	14/12/2022	14/12/2022	14/12/2022	14/12/2022	14/12/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.3	0.2	<0.1	0.2	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5	0.9	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5	<5	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1	<1	<1	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1	<1	<1	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1	<1	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5	<5	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	98	97	103	100	96
Surrogate $^{13}C_2$ *PFOA*	%	107	111	110	109	114
Extracted ISTD $^{13}C_3$ *PFBS*	%	81	86	84	84	72
Extracted ISTD $^{18}O_2$ *PFHxS*	%	94	105	104	104	94
Extracted ISTD $^{13}C_4$ *PFOS*	%	90	95	90	88	82

PFAS in Soils Extended						
Our Reference		312813-2	312813-9	312813-16	312813-21	312813-35
Your Reference	UNITS	BH28	BH31	BH32	BH38	BH02
Depth		0.5	0.5	0.3	0.4	0.1
Date Sampled		8/12/2022	8/12/2022	9/12/2022	9/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Extracted ISTD $^{13}C_4$ *PFBA*	%	94	105	103	102	96
Extracted ISTD $^{13}C_3$ *PFPeA*	%	80	90	90	94	75
Extracted ISTD $^{13}C_2$ *PFHxA*	%	97	109	110	120	100
Extracted ISTD $^{13}C_4$ *PFHpA*	%	91	105	101	106	96
Extracted ISTD $^{13}C_4$ *PFOA*	%	95	108	106	113	92
Extracted ISTD $^{13}C_5$ *PFNA*	%	98	107	108	114	98
Extracted ISTD $^{13}C_2$ *PFDA*	%	95	114	112	114	107
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	92	104	111	98	97
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	93	105	105	95	94
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	93	100	98	82	93
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	94	103	98	177	91
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	98	105	113	#	116
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	91	110	125	#	110
Extracted ISTD $^{13}C_8$ *FOSA*	%	87	92	89	74	79
Extracted ISTD d_3 *N MeFOSA*	%	85	88	86	62	81
Extracted ISTD d_5 *N EtFOSA*	%	89	97	91	66	87
Extracted ISTD d_7 *N MeFOSE*	%	92	101	99	61	90
Extracted ISTD d_9 *N EtFOSE*	%	94	100	94	56	84
Extracted ISTD d_3 *N MeFOSAA*	%	76	98	129	152	118
Extracted ISTD d_5 *N EtFOSAA*	%	68	102	115	124	101
Total Positive PFHxS & PFOS	µg/kg	0.3	0.2	<0.1	0.2	0.3
Total Positive PFOS & PFOA	µg/kg	0.3	0.2	<0.1	0.2	0.3
Total Positive PFAS	µg/kg	0.3	0.2	0.9	0.3	0.3

Chromium Suite						
Our Reference		312813-5	312813-6	312813-13	312813-14	312813-38
Your Reference	UNITS	BH28	BH28	BH31	BH31	BH02
Depth		3	4	4	5	2.0
Date Sampled		8/12/2022	8/12/2022	8/12/2022	8/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
Date analysed	-	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022
pH $_{kcl}$	pH units	5.8	4.7	6.5	4.2	6.6
s-TAA pH 6.5	%w/w S	<0.01	0.02	<0.01	0.04	<0.01
TAA pH 6.5	moles H^+ /t	<5	12	<5	26	<5
Chromium Reducible Sulfur	%w/w	0.006	0.006	0.02	<0.005	0.007
a-Chromium Reducible Sulfur	moles H^+ /t	4	4	12	<3	4
S_{HCl}	%w/w S	[NT]	[NT]	[NT]	0.040	[NT]
S_{KCl}	%w/w S	[NT]	[NT]	[NT]	0.009	[NT]
S_{NAS}	%w/w S	[NT]	[NT]	[NT]	0.030	[NT]
ANC_{BT}	% $CaCO_3$	[NT]	[NT]	0.50	[NT]	0.40
s-ANC_{BT}	%w/w S	[NT]	[NT]	0.16	[NT]	0.13
s-Net Acidity	%w/w S	0.013	0.026	<0.005	0.077	<0.005
a-Net Acidity	moles H^+ /t	8.2	16	<5	48	<5
Liming rate	kg $CaCO_3$ /t	<0.75	1	<0.75	4	<0.75
a-Net Acidity without ANCE	moles H^+ /t	8.2	16	12	48	<5
Liming rate without ANCE	kg $CaCO_3$ /t	<0.75	1.2	0.86	3.6	<0.75
s-Net Acidity without ANCE	%w/w S	0.013	0.026	0.018	0.077	0.0070

Chromium Suite		
Our Reference		312813-39
Your Reference	UNITS	BH02
Depth		3.0
Date Sampled		08/12/2022
Type of sample		Soil
Date prepared	-	19/12/2022
Date analysed	-	19/12/2022
pH $_{kcl}$	pH units	4.8
s-TAA pH 6.5	%w/w S	0.03
TAA pH 6.5	moles H^+ /t	17
Chromium Reducible Sulfur	%w/w	0.008
a-Chromium Reducible Sulfur	moles H^+ /t	5
S_{HCl}	%w/w S	[NT]
S_{KCl}	%w/w S	[NT]
S_{NAS}	%w/w S	[NT]
ANC_{BT}	% $CaCO_3$	[NT]
s-ANC_{BT}	%w/w S	[NT]
s-Net Acidity	%w/w S	0.035
a-Net Acidity	moles H^+ /t	22
Liming rate	kg $CaCO_3$ /t	2
a-Net Acidity without ANCE	moles H^+ /t	22
Liming rate without ANCE	kg $CaCO_3$ /t	1.7
s-Net Acidity without ANCE	%w/w S	0.035

Misc Inorg - Soil		
Our Reference		312813-32
Your Reference	UNITS	BH01
Depth		1.1
Date Sampled		08/12/2022
Type of sample		Soil
Date prepared	-	15/12/2022
Date analysed	-	15/12/2022
pH 1:5 soil:$CaCl_2$	pH Units	4.5
Total Organic Carbon (Walkley Black)	mg/kg	7,000

Clay 50-120g		
Our Reference		312813-32
Your Reference	UNITS	BH01
Depth		1.1
Date Sampled		08/12/2022
Type of sample		Soil
Date prepared	-	15/12/2022
Date analysed	-	16/12/2022
Clay in soils <2µm	% (w/w)	81

CEC		
Our Reference		312813-32
Your Reference	UNITS	BH01
Depth		1.1
Date Sampled		08/12/2022
Type of sample		Soil
Date prepared	-	16/12/2022
Date analysed	-	16/12/2022
Exchangeable Ca	meq/100g	9.3
Exchangeable K	meq/100g	0.2
Exchangeable Mg	meq/100g	3.4
Exchangeable Na	meq/100g	1.1
Cation Exchange Capacity	meq/100g	14

Method ID	Methodology Summary
AS1289.3.6.3	Particle Size Distribution using in house method INORG-107 by way of sieving and/or hydrometer sedimentation testing. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-036	Total Organic Carbon or Matter - A titrimetric method that measures the oxidisable organic content of soils.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Net acidity including ANC has a safety factor of 1.5 applied. Neutralising value (NV) of 100% is assumed for liming rate. Based on National acid sulfate soils identification and laboratory methods manual June 2018. The recommendation that the SHCL concentration be multiplied by a factor of 2 to ensure retained acidity is not underestimated, has not been applied in the SHCL results reported.
Metals-020	Determination of various metals by ICP-AES.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-OES analytical finish.
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.

Method ID	Methodology Summary
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.
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.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	312813-21
Date extracted	-			13/12/2022	[NT]	[NT]	[NT]	[NT]	13/12/2022	13/12/2022
Date analysed	-			14/12/2022	[NT]	[NT]	[NT]	[NT]	14/12/2022	14/12/2022
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	100	96
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	98
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	106	113
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	90
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	97	93
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	121	80
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	116	77
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	107	103
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	312813-21
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	102	[NT]	[NT]	[NT]	[NT]	101	104
Surrogate aaa-Trifluorotoluene	%		Org-023	122	[NT]	[NT]	[NT]	[NT]	101	99
Surrogate Toluene-d_8	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	99	114
Surrogate 4-Bromofluorobenzene	%		Org-023	110	[NT]	[NT]	[NT]	[NT]	99	109

QUALITY CONTROL: VOCs in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	13/12/2022	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	13/12/2022	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	117	[NT]
chloroform	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	121	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	127	[NT]
1,1,1-trichloroethane	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	106	[NT]
trichloroethene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	111	[NT]
bromodichloromethane	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	96	[NT]
dibromochloromethane	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	92	[NT]
tetrachloroethene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	122	[NT]
Surrogate Dibromofluorometha	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	94	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	115	[NT]
Surrogate Toluene-d_8	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	106	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	312813-2
Date extracted	-			14/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			19/12/2022	1	14/12/2022	14/12/2022		14/12/2022	14/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	103	96
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	103	96
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	96	90
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	98	91
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	100	93
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	110	102
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	108	96
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	122	1	95	97	2	101	92

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	312813-21
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	13/12/2022	13/12/2022
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	13/12/2022	13/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	109	92
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	109	92
Benzene	mg/kg	0.2	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	117	98
Toluene	mg/kg	0.5	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	119	97
Ethylbenzene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	99	84
m+p-xylene	mg/kg	2	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	105	90
o-Xylene	mg/kg	1	Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	108	92
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	[NT]	[NT]	[NT]	[NT]	115	99

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	312813-2
Date extracted	-			13/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			16/12/2022	1	19/12/2022	19/12/2022		16/12/2022	19/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	105	107
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	105	106
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	140	160	13	86	89
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	105	107
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	180	180	0	105	106
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	270	280	4	86	89
Surrogate o-Terphenyl	%		Org-020	74	1	93	86	8	87	128

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			[NT]	21	13/12/2022	13/12/2022		13/12/2022	[NT]
Date analysed	-			[NT]	21	19/12/2022	19/12/2022		19/12/2022	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	98	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	21	450	260	54	90	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	21	260	170	42	88	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	98	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	21	670	380	55	90	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	21	110	110	0	88	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	21	114	93	20	121	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	312813-2
Date extracted	-			13/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			16/12/2022	1	16/12/2022	16/12/2022		16/12/2022	16/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
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	91	81
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	84
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	89
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	0.3	0.3	0	88	91
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.5	0	81	93
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.5	50	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.3	0.3	0	77	65
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	0.7	0.8	13	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.82	0.79	4	112	119
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.4	40	[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	0.2	0.3	40	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	85	1	82	84	2	91	86

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			[NT]	21	13/12/2022	13/12/2022		13/12/2022	[NT]
Date analysed	-			[NT]	21	16/12/2022	16/12/2022		16/12/2022	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	21	0.2	0.1	67	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	21	0.4	0.3	29	83	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	21	0.2	0.2	0	86	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	21	16	9.8	48	92	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	21	3.2	2.1	42	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	21	23	14	49	90	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	21	22	14	44	95	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	9.8	6.0	48	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	21	9.7	6.7	37	67	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	21	14	8.9	45	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	21	7.8	5.0	44	120	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	21	3.5	2.3	41	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	1.0	0.7	35	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	21	4.4	3.0	38	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	21	95	99	4	88	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	312813-2
Date extracted	-			13/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			16/12/2022	1	16/12/2022	16/12/2022		16/12/2022	16/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	84
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	96	96
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	68	78
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	87	87
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	84
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	98	98
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	101
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	102
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	94
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	98	98
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	87	3	96	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	312813-2
Date extracted	-			13/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			16/12/2022	1	16/12/2022	16/12/2022		16/12/2022	16/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	121	131
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	91	91
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	103
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	124
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	110
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	101
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	117	118
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	87	3	96	95

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	312813-2
Date extracted	-			13/12/2022	1	13/12/2022	13/12/2022		13/12/2022	13/12/2022
Date analysed	-			16/12/2022	1	16/12/2022	16/12/2022		16/12/2022	16/12/2022
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	122	103
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	87	3	96	95

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312813-2
Date prepared	-			14/12/2022	1	14/12/2022	14/12/2022		14/12/2022	14/12/2022
Date analysed	-			15/12/2022	1	15/12/2022	15/12/2022		15/12/2022	15/12/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	90	80
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	85	83
Chromium	mg/kg	1	Metals-020	<1	1	16	9	56	91	87
Copper	mg/kg	1	Metals-020	<1	1	54	29	60	93	111
Lead	mg/kg	1	Metals-020	<1	1	17	10	52	88	83
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	93	87
Nickel	mg/kg	1	Metals-020	<1	1	11	7	44	86	73
Zinc	mg/kg	1	Metals-020	<1	1	43	24	57	86	77
Iron	mg/kg	10	Metals-020	<10	[NT]	[NT]	[NT]	[NT]	91	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	14/12/2022	14/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	15/12/2022	15/12/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	21	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	21	13	11	17	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	21	13	12	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	21	13	12	8	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	21	2	1	67	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	21	5	4	22	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312813-2
Date prepared	-			14/12/2022	16	14/12/2022	16/12/2022		14/12/2022	14/12/2022
Date analysed	-			14/12/2022	16	14/12/2022	16/12/2022		14/12/2022	14/12/2022
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	94	102
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	102	101
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	101	90
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	105	95
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	93	94
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	87	89
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	96	93
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	97	105
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	96	91
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	103	115
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	97	98
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	100	90
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	16	<0.5	<0.5	0	104	94
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	16	<0.5	<0.5	0	93	79
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	16	0.9	1	11	92	93
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	16	<0.5	<0.5	0	98	94
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	16	<5	<5	0	100	97
4:2 FTS	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	99	102
6:2 FTS	µg/kg	0.1	Org-029	<0.1	16	<0.1	<0.1	0	95	96
8:2 FTS	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	98	103
10:2 FTS	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	99	110
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	16	<1	<1	0	100	110
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	16	<1	<1	0	99	94
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	16	<1	<1	0	101	97
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	16	<1	<1	0	100	100
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	16	<5	<5	0	103	105
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	100	101
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	16	<0.2	<0.2	0	96	113
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	99	16	103	96	7	97	99
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	105	16	110	102	8	101	110

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312813-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	104	16	84	99	16	99	85
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	99	16	104	94	10	90	96
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	101	16	90	98	9	102	92
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	104	16	103	96	7	103	95
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	101	16	90	95	5	99	82
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	100	16	110	97	13	102	99
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	99	16	101	98	3	97	92
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	101	16	106	103	3	100	98
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	103	16	108	104	4	98	100
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	99	16	112	107	5	95	97
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	101	16	111	112	1	102	94
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	107	16	105	115	9	103	97
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	113	16	98	107	9	106	90
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	108	16	98	103	5	99	92
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	108	16	113	113	0	106	100
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	113	16	125	146	15	108	100
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	105	16	89	106	17	102	86
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	100	16	86	102	17	94	86
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	103	16	91	105	14	94	90
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	104	16	99	99	0	102	97

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	312813-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	103	16	94	101	7	99	94
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	109	16	129	115	11	105	71
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	110	16	115	124	8	106	70

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	14/12/2022	14/12/2022		[NT]	[NT]
Date analysed	-			[NT]	21	14/12/2022	14/12/2022		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	[NT]	21	0.1	0.1	0	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	[NT]	21	0.2	0.2	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	[NT]	21	<5	<5	0	[NT]	[NT]
4:2 FTS	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
6:2 FTS	µg/kg	0.1	Org-029	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
8:2 FTS	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
10:2 FTS	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	21	<1	<1	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	[NT]	21	<1	<1	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	[NT]	21	<1	<1	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	[NT]	21	<1	<1	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	[NT]	21	<5	<5	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	21	100	98	2	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	21	109	112	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	21	84	80	5	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	21	104	106	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	21	88	87	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	21	102	104	2	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	21	94	89	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	21	120	121	1	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	21	106	109	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	21	113	109	4	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	21	114	115	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	21	114	112	2	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	21	98	103	5	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	21	95	95	0	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	21	82	81	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	21	177	183	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	21	#	#		[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	21	#	#		[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	21	74	72	3	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	21	62	64	3	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	21	66	68	3	[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	21	61	59	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	21	56	56	0	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	21	152	148	3	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	21	124	122	2	[NT]	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			19/12/2022	5	19/12/2022	19/12/2022		19/12/2022	[NT]
Date analysed	-			19/12/2022	5	19/12/2022	19/12/2022		19/12/2022	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	5	5.8	5.8	0	100	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	5	<0.01	<0.01	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	5	<5	6	18	111	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	5	0.006	0.005	18	118	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	5	4	3	29	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	5	[NT]	[NT]		[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	5	[NT]	[NT]		[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	5	[NT]	[NT]		[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	5	[NT]	[NT]		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	5	[NT]	[NT]		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	5	0.013	0.014	7	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	5	8.2	8.5	4	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	5	<0.75	<0.75	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	5	8.2	8.5	4	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	5	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	5	0.013	0.014	7	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
Date analysed	-			15/12/2022	[NT]	[NT]	[NT]	[NT]	15/12/2022	[NT]
pH 1:5 soil:$CaCl_2$	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]
Total Organic Carbon (Walkley Black)	mg/kg	1000	Inorg-036	<1000	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			16/12/2022	[NT]	[NT]	[NT]	[NT]	16/12/2022	[NT]
Date analysed	-			16/12/2022	[NT]	[NT]	[NT]	[NT]	16/12/2022	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	[NT]	[NT]	[NT]	[NT]	108	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 312813-1 for Cr, Cu, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 312813-43.

OC's/OP/PCB in Soil - The PQL for 312813-20,24 has been raised due to the sample matrix thereby requiring a dilution.

PAHs in Soil - The PQL for 31281320,24 has been raised due to the sample matrix thereby requiring a dilution.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Asbestos: A portion of the supplied sample was sub-sampled for asbestos according to ASB-001 asbestos subsampling procedure. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab/MPL recommends supplying 40-60g or 500ml of sample in its own container.
Note: Samples 312813-1,9,15,20,22,26,28,30,35,42 were sub-sampled from bags provided by the client.

Note: Samples 312813-2,18,24 were sub-sampled from jars provided by the client.

TRH Soil C10-C40 NEPM
- # Percent recovery for the surrogate is not possible to report as the high concentration of analytes in samples 312813-20,24 have caused interference.
- The RPD for duplicate results is accepted due to the non homogenous nature of sample 312813-21,21d.

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customerservice@envirolab.com.au
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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	312813-A
Date Sample Received	09/12/2022
Date Instructions Received	20/12/2022
Date Results Expected to be Reported	05/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	1
Cooling Method	Ice
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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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
BH11-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH28-0.5																				✓
BH28-1																				✓
BH28-2																				✓
BH28-3																				✓
BH28-4																				✓
BH28-5																				✓
BH28-6																				✓
BH31-0.5																				✓
BH31-1																				✓
BH31-2																				✓
BH31-3																				✓
BH31-4																				✓
BH31-5																				✓
BH32-0.1	✓																		✓	
BH32-0.3																				✓
BH32-0.4																				✓
BH37-0.2																				✓
BH37-0.35																				✓
BH38-0.15	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
BH38-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH39-0.3																				✓
BH39-0.5																				✓
BH40-0.25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH40-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH41-0.25																				✓
BH41-0.4																				✓
BH29-0.25																				✓
BH29-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH01-0.1																				✓
BH01-0.5																				✓
BH01-1.1																				✓
BH01-2.0																				✓
BH01-3.0																				✓
BH02-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH02-0.5																				✓
BH02-1.0																				✓
BH02-2.0																				✓
BH02-3.0																				✓
BH02-4.0																				✓

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Sample ID	TCLP Preparation - Acid	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	Nickel	On Hold
BH40-0.1																				✓
SS1																				✓
BH11 - [TRIPLICATE]-0.1																				✓

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.

Ming To

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Tuesday, 20 December 2022 6:02 PM
To: Login; Samplereceipt
Cc: Dean Stafford
Subject: 22038 - Further analysis

Ref: 312813-A
TAT: Standard
Due: 05/01/2023
MT

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please have the following further analysis for samples from the project 22038 on standard TAT:

- TCLP - Benzo(a)pyrene
  - BH02 - 0.1 312813-35
  - BH08 - 0.1 312405-31
  - BH11 - 0.1 312813-1
  - BH29 - 0.4 312813-29
  - BH30 - 0.1 312491-49
  - BH38 - 0.15 312813-20
  - BH38 - 0.4 312813-21
  - BH40 - 0.25 312813-24
  - BH40 - 0.5 312813-25
  - BH45 - 0.2 312652-25
  - BH45 - 0.5 312652-26
- TCLP - Lead
  - BH27 - 0.1 312491-15
- TCLP - Nickel
  - BH05 - 0.1 312405-11
  - BH14 - 0.5 312491-16
  - BH32 - 0.1 312813-15

Any questions please let me know
Thanks

Jack Palma
Senior Environmental Scientist

Unit 1A, Level 1
29-33 Waratah Street,
Kirrawee NSW 2232
jackpalma@reditus.com.au
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CERTIFICATE OF ANALYSIS 312813-A

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	09/12/2022
Date completed instructions received	20/12/2022

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

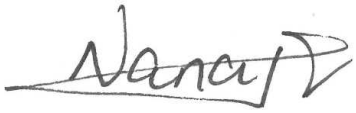
Date results requested by	05/01/2023
Date of Issue	05/01/2023

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Results Approved By
Hannah Nguyen, Metals Supervisor
Josh Williams, Organics and LC Supervisor
Kyle Gavrily, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

TCLP Preparation - Acid						
Our Reference		312813-A-1	312813-A-15	312813-A-20	312813-A-21	312813-A-24
Your Reference	UNITS	BH11	BH32	BH38	BH38	BH40
Depth		0.1	0.1	0.15	0.4	0.25
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	10.5	8.5	8.5	8.1	8.9
pH of soil TCLP (after HCl)	pH units	2.2	1.8	1.7	1.6	1.7
Extraction fluid used		1	1	1	1	1
pH of final Leachate	pH units	7.0	5.2	5.0	5.1	5.1

TCLP Preparation - Acid				
Our Reference		312813-A-25	312813-A-29	312813-A-35
Your Reference	UNITS	BH40	BH29	BH02
Depth		0.5	0.4	0.1
Date Sampled		9/12/2022	9/12/2022	08/12/2022
Type of sample		Soil	Soil	Soil
pH of soil for fluid# determ.	pH units	8.6	9.2	9.7
pH of soil TCLP (after HCl)	pH units	1.7	1.7	1.9
Extraction fluid used		1	1	1
pH of final Leachate	pH units	5.1	5.1	5.7

PAHs in TCLP (USEPA 1311)						
Our Reference		312813-A-1	312813-A-20	312813-A-21	312813-A-24	312813-A-25
Your Reference	UNITS	BH11	BH38	BH38	BH40	BH40
Depth		0.1	0.15	0.4	0.25	0.5
Date Sampled		9/12/2022	9/12/2022	9/12/2022	9/12/2022	9/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Acenaphthene in TCLP	mg/L	<0.001	0.002	<0.001	<0.001	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Phenanthrene in TCLP	mg/L	<0.001	0.011	<0.001	0.01	0.001
Anthracene in TCLP	mg/L	<0.001	0.003	<0.001	0.003	<0.001
Fluoranthene in TCLP	mg/L	<0.001	0.003	<0.001	0.003	<0.001
Pyrene in TCLP	mg/L	<0.001	0.003	<0.001	0.002	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	0.001	<0.001	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Total +ve PAH's	mg/L	NIL (+)VE	0.023	NIL (+)VE	0.018	0.0012
Surrogate p-Terphenyl-d14	%	90	86	81	76	75

PAHs in TCLP (USEPA 1311)			
Our Reference		312813-A-29	312813-A-35
Your Reference	UNITS	BH29	BH02
Depth		0.4	0.1
Date Sampled		9/12/2022	08/12/2022
Type of sample		Soil	Soil
Date extracted	-	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022
Naphthalene in TCLP	mg/L	<0.001	<0.001
Acenaphthylene in TCLP	mg/L	<0.001	<0.001
Acenaphthene in TCLP	mg/L	<0.001	<0.001
Fluorene in TCLP	mg/L	<0.001	<0.001
Phenanthrene in TCLP	mg/L	<0.001	<0.001
Anthracene in TCLP	mg/L	<0.001	<0.001
Fluoranthene in TCLP	mg/L	<0.001	<0.001
Pyrene in TCLP	mg/L	<0.001	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001	<0.001
Chrysene in TCLP	mg/L	<0.001	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001	<0.001
Total +ve PAH's	mg/L	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	85	76

Metals from Leaching Fluid pH 2.9 or 5		
Our Reference		312813-A-15
Your Reference	UNITS	BH32
Depth		0.1
Date Sampled		9/12/2022
Type of sample		Soil
Date extracted	-	22/12/2022
Date analysed	-	22/12/2022
Nickel	mg/L	0.06

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020	Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	84	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	79	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	87	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Nickel	mg/L	0.02	Metals-020	<0.02	[NT]	[NT]	[NT]	[NT]	95	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

CHAIN OF CUSTODY FORM - Client

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Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No.:
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Date results required: Standard Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 155 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample Information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 8	PFAS (28 analytes)	VOC	RCPH Chl. Characterisation	Chromium Reducible Suite	Combo 3								Provide as much information about the sample as you can
1	BH18	0.1	16/12/2022	Soil		x														
2	BH18	0.4	16/12/2022	Soil	x															
3	BH19	0.1	16/12/2022	Soil		x														
4	BH19	0.5	16/12/2022	Soil	x															
5	BH19	1	16/12/2022	Soil								x								
6	BH19	2	16/12/2022	Soil	x															
7	BH19	2.3	16/12/2022	Soil	x															
8	BH20	0.1	16/12/2022	Soil		x														
9	BH20	0.5	16/12/2022	Soil	x															
10	BH20	1	16/12/2022	Soil	x															
11	BH20	2	16/12/2022	Soil	x															
12	BH20	3	16/12/2022	Soil	x															
13	BH21	0.1	16/12/2022	Soil		x														
14	BH21	0.5	16/12/2022	Soil	x															
15	BH21	1	16/12/2022	Soil	x															
16	BH21	2	16/12/2022	Soil	x															
17	BH21	2.8	16/12/2022	Soil								x								
18	BH22	0.1	16/12/2022	Soil	x															
19	BH22	0.5	16/12/2022	Soil		x														
20	BH22	1	16/12/2022	Soil								x								
21	BH22	2	16/12/2022	Soil	x															
22	BH22	2.8	16/12/2022	Soil	x															
23	BH23	0.1	16/12/2022	Soil		x														
24	BH23	1	16/12/2022	Soil	x															
25	BH23	2	16/12/2022	Soil	x															
26	BH23	2.6	16/12/2022	Soil	x															
27	BH46	0.5	16/12/2022	Soil	x															
28	BH46	1	16/12/2022	Soil			x													
29	BH46	2	16/12/2022	Soil	x															
30	BH46	3	16/12/2022	Soil	x															
31	BH47	0.5	16/12/2022	Soil	x															
32	BH47	1	16/12/2022	Soil		x														
33	BH47	2	16/12/2022	Soil	x															
34	BH47	3	16/12/2022	Soil	x															
35	DUP05	-	16/12/2022	Soil			x													
36	DUP06	-	16/12/2022	Soil	x															
-	TRIP05	-	16/12/2022	Soil			x													Please forward to ALS
-	TRIP06	-	16/12/2022	Soil	x															Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company): ES STH	*Lab Use Only*
Print Name: Jack Palma	Print Name: [illegible]	Job number: 315427
Date & Time: 16/12/2022	Date & Time: 19/16/12/22 1350	Temperature: 14°C 4° Cooling: Ice/Ice pack / None
Signature:	Signature:	Security seal: Intact / Broken / None
		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD

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CERTIFICATE OF ANALYSIS 313427

Client Details

Client	Reditus Consulting
Attention	Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	36 Soil
Date samples received	16/12/2022
Date completed instructions received	19/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	04/01/2023
Date of Issue	04/01/2023

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Stuart Chen
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Kyle Gavrily, Senior Chemist
Liam Timmins, Organic Instruments Team Leader
Loren Bardwell, Development Chemist
Lucy Zhu, Asbestos Supervisor
Steven Luong, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		313427-1	313427-3	313427-5	313427-8	313427-13
Your Reference	UNITS	BH18	BH19	BH19	BH20	BH21
Depth		0.1	0.1	1	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	89	78	71	88	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		313427-17	313427-19	313427-20	313427-23	313427-28
Your Reference	UNITS	BH21	BH22	BH22	BH23	BH46
Depth		2.8	0.5	1	0.1	1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	88	77	81	92

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		313427-32	313427-35
Your Reference	UNITS	BH47	DUP05
Depth		1	-
Date Sampled		16/12/2022	16/12/2022
Type of sample		Soil	Soil
Date extracted	-	20/12/2022	20/12/2022
Date analysed	-	22/12/2022	22/12/2022
TRH C_6 - C_9	mg/kg	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	94	87

svTRH (C10-C40) in Soil						
Our Reference		313427-1	313427-3	313427-5	313427-8	313427-13
Your Reference	UNITS	BH18	BH19	BH19	BH20	BH21
Depth		0.1	0.1	1	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	110	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	140	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	240	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	200	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	160	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	360	<50	<50	<50	<50
Surrogate o-Terphenyl	%	87	82	82	83	81

svTRH (C10-C40) in Soil						
Our Reference		313427-17	313427-19	313427-20	313427-23	313427-28
Your Reference	UNITS	BH21	BH22	BH22	BH23	BH46
Depth		2.8	0.5	1	0.1	1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	84	84	84	94	84

svTRH (C10-C40) in Soil			
Our Reference		313427-32	313427-35
Your Reference	UNITS	BH47	DUP05
Depth		1	-
Date Sampled		16/12/2022	16/12/2022
Type of sample		Soil	Soil
Date extracted	-	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	81	95

PAHs in Soil						
Our Reference		313427-1	313427-3	313427-5	313427-8	313427-13
Your Reference	UNITS	BH18	BH19	BH19	BH20	BH21
Depth		0.1	0.1	1	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	21/12/2022	30/12/2022	30/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.6	<0.1	<0.1	0.6	0.6
Anthracene	mg/kg	0.2	<0.1	<0.1	0.1	0.2
Fluoranthene	mg/kg	1.7	0.3	0.2	0.9	1
Pyrene	mg/kg	2.2	0.3	0.2	0.9	0.9
Benzo(a)anthracene	mg/kg	1	0.2	<0.2	0.4	0.4
Chrysene	mg/kg	1.1	0.2	<0.2	0.4	0.5
Benzo(b,j+k)fluoranthene	mg/kg	2	0.3	<0.2	0.6	0.7
Benzo(a)pyrene	mg/kg	0.97	0.1	0.06	0.4	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.1	<0.1	0.2	0.2
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.6	<0.1	<0.1	0.2	0.2
Total +ve PAH's	mg/kg	10	1.3	0.4	4.8	5.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.4	<0.5	<0.5	<0.5	0.6
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.4	<0.5	<0.5	0.5	0.6
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.4	<0.5	<0.5	0.6	0.7
Surrogate p-Terphenyl-d14	%	79	82	104	83	82

PAHs in Soil						
Our Reference		313427-17	313427-19	313427-20	313427-23	313427-28
Your Reference	UNITS	BH21	BH22	BH22	BH23	BH46
Depth		2.8	0.5	1	0.1	1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	30/12/2022	21/12/2022	30/12/2022	30/12/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.3	0.3	0.3	<0.1
Anthracene	mg/kg	<0.1	0.1	0.1	0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.5	0.6	0.7	<0.1
Pyrene	mg/kg	<0.1	0.6	1.2	1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.3	0.4	0.5	<0.1
Chrysene	mg/kg	<0.1	0.3	0.4	0.5	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.4	0.5	0.7	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.2	0.4	0.4	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1	0.2	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	0.2	0.2	<0.1
Total +ve PAH's	mg/kg	<0.05	2.9	4.3	4.6	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	0.5	0.6	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	0.6	0.7	<0.5
Surrogate p-Terphenyl-d14	%	102	80	102	83	80

PAHs in Soil			
Our Reference		313427-32	313427-35
Your Reference	UNITS	BH47	DUP05
Depth		1	-
Date Sampled		16/12/2022	16/12/2022
Type of sample		Soil	Soil
Date extracted	-	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2
Pyrene	mg/kg	<0.1	0.2
Benzo(a)anthracene	mg/kg	<0.1	0.1
Chrysene	mg/kg	<0.1	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.09
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.68
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	80	81

Organochlorine Pesticides in soil						
Our Reference		313427-1	313427-3	313427-8	313427-13	313427-19
Your Reference	UNITS	BH18	BH19	BH20	BH21	BH22
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022	30/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.4	0.1	0.8	0.8	0.2
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	79	81	84	81	82

Organochlorine Pesticides in soil					
Our Reference		313427-23	313427-28	313427-32	313427-35
Your Reference	UNITS	BH23	BH46	BH47	DUP05
Depth		0.1	1	1	-
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.1	<0.1	0.4
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	83	82	81

Organophosphorus Pesticides in Soil						
Our Reference		313427-1	313427-3	313427-8	313427-13	313427-19
Your Reference	UNITS	BH18	BH19	BH20	BH21	BH22
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022	30/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	79	81	84	81	82

Organophosphorus Pesticides in Soil					
Our Reference		313427-23	313427-28	313427-32	313427-35
Your Reference	UNITS	BH23	BH46	BH47	DUP05
Depth		0.1	1	1	-
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	83	82	81

PCBs in Soil						
Our Reference		313427-1	313427-3	313427-8	313427-13	313427-19
Your Reference	UNITS	BH18	BH19	BH20	BH21	BH22
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022	30/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	79	81	84	81	82

PCBs in Soil					
Our Reference		313427-23	313427-28	313427-32	313427-35
Your Reference	UNITS	BH23	BH46	BH47	DUP05
Depth		0.1	1	1	-
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	30/12/2022	30/12/2022	30/12/2022	30/12/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	83	82	81

Acid Extractable metals in soil						
Our Reference		313427-1	313427-3	313427-5	313427-8	313427-13
Your Reference	UNITS	BH18	BH19	BH19	BH20	BH21
Depth		0.1	0.1	1	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Arsenic	mg/kg	<4	<4	5	<4	4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	9	8	18	28
Copper	mg/kg	18	91	68	27	21
Lead	mg/kg	19	10	25	16	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	10	22	14	30
Zinc	mg/kg	28	40	90	31	23

Acid Extractable metals in soil						
Our Reference		313427-17	313427-19	313427-20	313427-23	313427-28
Your Reference	UNITS	BH21	BH22	BH22	BH23	BH46
Depth		2.8	0.5	1	0.1	1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	11	6	20	4
Copper	mg/kg	50	37	46	22	13
Lead	mg/kg	11	20	16	20	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	13	9	4	16	2
Zinc	mg/kg	79	30	17	28	7

Acid Extractable metals in soil					
Our Reference		313427-32	313427-35	313427-37	313427-38
Your Reference	UNITS	BH47	DUP05	BH18 - [TRIPLICATE]	BH23 - [TRIPLICATE]
Depth		1	-	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Arsenic	mg/kg	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	6	5	11
Copper	mg/kg	3	15	10	20
Lead	mg/kg	2	10	10	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	4	5	7
Zinc	mg/kg	4	16	15	25

Moisture						
Our Reference		313427-1	313427-3	313427-5	313427-8	313427-13
Your Reference	UNITS	BH18	BH19	BH19	BH20	BH21
Depth		0.1	0.1	1	0.1	0.1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
Moisture	%	2.7	0.9	0.8	6,700	1.1

Moisture						
Our Reference		313427-17	313427-19	313427-20	313427-23	313427-28
Your Reference	UNITS	BH21	BH22	BH22	BH23	BH46
Depth		2.8	0.5	1	0.1	1
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	20/12/2022	20/12/2022	20/12/2022	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022	21/12/2022	21/12/2022	21/12/2022
Moisture	%	1.5	0.7	2.3	0.8	2.5

Moisture			
Our Reference		313427-32	313427-35
Your Reference	UNITS	BH47	DUP05
Depth		1	-
Date Sampled		16/12/2022	16/12/2022
Type of sample		Soil	Soil
Date prepared	-	20/12/2022	20/12/2022
Date analysed	-	21/12/2022	21/12/2022
Moisture	%	<0.1	2.4

Asbestos ID - soils						
Our Reference		313427-1	313427-3	313427-8	313427-13	313427-19
Your Reference	UNITS	BH18	BH19	BH20	BH21	BH22
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		16/12/2022	16/12/2022	16/12/2022	16/12/2022	16/12/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Sample mass tested	g	Approx. 105g	Approx. 55g	Approx. 65g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils			
Our Reference		313427-23	313427-32
Your Reference	UNITS	BH23	BH47
Depth		0.1	1
Date Sampled		16/12/2022	16/12/2022
Type of sample		Soil	Soil
Date analysed	-	28/12/2022	28/12/2022
Sample mass tested	g	Approx. 75g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
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-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			22/12/2022	1	22/12/2022	22/12/2022		22/12/2022	22/12/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	115	101
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	115	101
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	114	109
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	116	100
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	115	98
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	119	96
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	115	101
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	85	1	89	80	11	87	99

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	22/12/2022	22/12/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	23	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	23	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	23	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	23	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	23	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	23	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	23	81	93	14	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			21/12/2022	1	21/12/2022	21/12/2022		21/12/2022	21/12/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	98	89
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	110	<100	10	98	79
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	140	150	7	100	70
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	98	89
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	200	200	0	98	79
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	160	160	0	100	70
Surrogate o-Terphenyl	%		Org-020	86	1	87	86	1	80	82

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	21/12/2022	21/12/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	23	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	23	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	23	<100	110	10	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	23	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	23	94	86	9	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			30/12/2022	1	30/12/2022	30/12/2022		30/12/2022	30/12/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	95
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	95	95
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	90
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.6	0.5	18	106	95
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	0.2	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	1.7	1.7	0	102	102
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	2.2	2.2	0	103	111
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	1	1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	1.1	1.1	0	73	77
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	2	2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.97	0.97	0	88	101
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.5	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	0.6	0.6	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	72	1	79	86	8	85	83

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	30/12/2022	30/12/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	23	0.3	0.4	29	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	23	0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	23	0.7	1	35	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	23	1	1.4	33	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	0.5	0.7	33	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	23	0.5	0.7	33	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	23	0.7	1	35	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	23	0.4	0.60	40	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	23	0.2	0.3	40	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	23	0.2	0.4	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	23	83	80	4	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			30/12/2022	1	30/12/2022	30/12/2022		30/12/2022	30/12/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	86
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	90	96
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	109	107
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	97	97
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	91
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	105	101
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	0.4	0.4	0	104	113
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	98
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	86	98
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	88	100
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	75	1	79	85	7	85	87

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	30/12/2022	30/12/2022		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	23	0.2	0.3	40	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	23	84	81	4	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			30/12/2022	1	30/12/2022	30/12/2022		30/12/2022	30/12/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	97
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	91	86
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	79	85
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	99
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	104
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	74
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	72	99
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	75	1	79	85	7	85	87

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	30/12/2022	30/12/2022		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	23	84	81	4	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	313427-3
Date extracted	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			30/12/2022	1	30/12/2022	30/12/2022		30/12/2022	30/12/2022
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	122	120
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	75	1	79	85	7	85	87

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	30/12/2022	30/12/2022		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	23	84	81	4	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	313427-3
Date prepared	-			20/12/2022	1	20/12/2022	20/12/2022		20/12/2022	20/12/2022
Date analysed	-			28/12/2022	1	28/12/2022	28/12/2022		28/12/2022	28/12/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	87	97
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	81	78
Chromium	mg/kg	1	Metals-020	<1	1	11	14	24	85	98
Copper	mg/kg	1	Metals-020	<1	1	18	23	24	84	#
Lead	mg/kg	1	Metals-020	<1	1	19	19	0	84	108
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	103	90
Nickel	mg/kg	1	Metals-020	<1	1	9	15	50	83	91
Zinc	mg/kg	1	Metals-020	<1	1	28	33	16	82	75

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	23	20/12/2022	20/12/2022		[NT]	[NT]
Date analysed	-			[NT]	23	28/12/2022	28/12/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	23	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	23	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	23	20	10	67	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	23	22	20	10	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	23	20	22	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	23	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	23	16	6	91	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	23	28	23	20	[NT]	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

PAHs in Soil - The PQL has been raised due to interferences from analytes (other than those being tested) in sample/s 313427-5.

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 313427-1 for Ni. Therefore a triplicate result has been issued as laboratory sample number 313427-37.
- The laboratory RPD acceptance criteria has been exceeded for 313427-23 for Cr and Ni. Therefore a triplicate result has been issued as laboratory sample number 313427-38.
- # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma

Sample Login Details

Your reference	22038
Envirolab Reference	313427-A
Date Sample Received	16/12/2022
Date Instructions Received	09/01/2023
Date Results Expected to be Reported	16/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoiced accordingly.

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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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	On Hold
BH18-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH18-0.4																						✓
BH19-0.1																						✓
BH19-0.5																						✓
BH19-1																						✓
BH19-2																						✓
BH19-2.3																						✓
BH20-0.1																						✓
BH20-0.5																						✓
BH20-1																						✓
BH20-2																						✓
BH20-3																						✓
BH21-0.1																						✓
BH21-0.5																						✓
BH21-1																						✓
BH21-2																						✓
BH21-2.8																						✓
BH22-0.1																						✓
BH22-0.5																						✓
BH22-1																						✓

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Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Naphthalene in TCLP	Acenaphthylene in TCLP	Acenaphthene in TCLP	Fluorene in TCLP	Phenanthrene in TCLP	Anthracene in TCLP	Fluoranthene in TCLP	Pyrene in TCLP	Benzo(a)anthracene in TCLP	Chrysene in TCLP	Benzo(bjk)fluoranthene in TCLP	Benzo(a)pyrene in TCLP	Indeno(1,2,3-c,d)pyrene - TCLP	Dibenzo(a,h)anthracene in TCLP	Benzo(g,h,i)perylene in TCLP	Total +vePAH's	Surrogate p-Terphenyl-d14	On Hold
BH22-2																						✓
BH22-2.8																						✓
BH23-0.1																						✓
BH23-1																						✓
BH23-2																						✓
BH23-2.6																						✓
BH46-0.5																						✓
BH46-1																						✓
BH46-2																						✓
BH46-3																						✓
BH47-0.5																						✓
BH47-1																						✓
BH47-2																						✓
BH47-3																						✓
DUP05																						✓
DUP06																						✓
BH18 - [TRIPLICATE]-0.1																						✓
BH23 - [TRIPLICATE]-0.1																						✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

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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.

Ming To

From: Lucy Zhu
Sent: Monday, 9 January 2023 1:15 PM
To: Jack Palma; Sample Receipt NSW
Cc: Dean Stafford
Subject: Re: Results for Registration 313427 22038

Ref: 313427-A
TAT: Standard.
Due: 16/01/2023
MT

Hi Jack,

Yes, you can submit the sample.
@Sample Receipt NSW please.

Get Outlook for iOS

Kind Regards,

Lucy Zhu | Asbestos Supervisor | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200
E LZhu@envirolab.com.au | W www.envirolab.com.au

Follow us on: LinkedIn | Facebook | Twitter

Samples will be analysed per our T&C's.

From: Jack Palma <jackpalma@reditus.com.au>
Sent: Monday, January 9, 2023 12:01 pm
To: Lucy Zhu <LZhu@envirolab.com.au>
Cc: Dean Stafford <deanstafford@reditus.com.au>
Subject: Re: Results for Registration 313427 22038

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi there,
Could I please submit BH18-0.1 for TCLP Benzo(a)pyrene?
Thanks

On Wed, 4 Jan 2023 at 11:10, Lucy Zhu <LZhu@envirolab.com.au> wrote:

> Please refer to attached for:
> a copy of the Certificate of Analysis
> a copy of the COC/paperwork received from you
> ESDAT Extracts
> an Excel or .csv file containing the results
>
> Please note that a hard copy will not be posted.
>
> Enquiries should be made directly to:
> customerservice@envirolab.com.au
>
> How did we do? Send Feedback

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CERTIFICATE OF ANALYSIS 313427-A

Client Details

Client	Reditus Consulting
Attention	Jack Palma
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	additional analysis
Date samples received	16/12/2022
Date completed instructions received	09/01/2023

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	16/01/2023
Date of Issue	12/01/2023

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By
Liam Timmins, Organic Instruments Team Leader

Authorised By

Nancy Zhang, Laboratory Manager

PAHs in TCLP (USEPA 1311)		
Our Reference		313427-A-1
Your Reference	UNITS	BH18
Depth		0.1
Date Sampled		16/12/2022
Type of sample		Soil
pH of soil for fluid# determ.	pH units	11.0
pH of soil TCLP (after HCl)	pH units	2.9
Extraction fluid used		1
pH of final Leachate	pH units	7.7
Date extracted	-	11/01/2023
Date analysed	-	11/01/2023
Naphthalene in TCLP	mg/L	<0.001
Acenaphthylene in TCLP	mg/L	<0.001
Acenaphthene in TCLP	mg/L	<0.001
Fluorene in TCLP	mg/L	<0.001
Phenanthrene in TCLP	mg/L	<0.001
Anthracene in TCLP	mg/L	<0.001
Fluoranthene in TCLP	mg/L	<0.001
Pyrene in TCLP	mg/L	<0.001
Benzo(a)anthracene in TCLP	mg/L	<0.001
Chrysene in TCLP	mg/L	<0.001
Benzo(bjk)fluoranthene in TCLP	mg/L	<0.002
Benzo(a)pyrene in TCLP	mg/L	<0.001
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	<0.001
Dibenzo(a,h)anthracene in TCLP	mg/L	<0.001
Benzo(g,h,i)perylene in TCLP	mg/L	<0.001
Total +ve PAH's	mg/L	NIL (+)VE
Surrogate p-Terphenyl-d14	%	86

Method ID	Methodology Summary
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the mass used may be scaled down from default based on sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Org-022/025	Leachates are extracted with Dichloromethane and analysed by GC-MS/GC-MSMS.

QUALITY CONTROL: PAHs in TCLP (USEPA 1311)					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			11/01/2023	[NT]	[NT]	[NT]	[NT]	11/01/2023	[NT]
Date analysed	-			11/01/2023	[NT]	[NT]	[NT]	[NT]	11/01/2023	[NT]
Naphthalene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Acenaphthylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Fluorene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	72	[NT]
Phenanthrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	86	[NT]
Anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	80	[NT]
Pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	85	[NT]
Benzo(a)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	75	[NT]
Benzo(bjk)fluoranthene in TCLP	mg/L	0.002	Org-022/025	<0.002	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	76	[NT]
Indeno(1,2,3-c,d)pyrene - TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene in TCLP	mg/L	0.001	Org-022/025	<0.001	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	71	[NT]	[NT]	[NT]	[NT]	77	[NT]

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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
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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.
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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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

Holding time exceedance

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2245999**

Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: deanstafford@reditus.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 22038	Page	: 1 of 2
Order number	: 22038	Quote number	: ES2019REDITUS0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	:		
Sampler	: JACK PALMA		

Dates

Date Samples Received	: 19-Dec-2022 16:30	Issue Date	: 21-Dec-2022
Client Requested Due Date	: 03-Jan-2023	Scheduled Reporting Date	: **03-Jan-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 6.0°C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 2 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2245999-001	16-Dec-2022 00:00	TRIP05		✓	✓
ES2245999-002	16-Dec-2022 00:00	TRIP06	✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	accounts@reditusconsulting.com

Dean Stafford

- *AU Certificate of Analysis - NATA (COA)	Email	deanstafford@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	deanstafford@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	deanstafford@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	deanstafford@reditus.com.au
- A4 - AU Tax Invoice (INV)	Email	deanstafford@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	deanstafford@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	deanstafford@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	deanstafford@reditus.com.au

Esdat Deliverables

- EDI Format - ESDAT (ESDAT)	Email	reditusconsulting@esdat.com.au

JACK PALMA

- *AU Certificate of Analysis - NATA (COA)	Email	jackpalma@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jackpalma@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jackpalma@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jackpalma@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	jackpalma@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	jackpalma@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	jackpalma@reditus.com.au

CHAIN OF CUSTODY FORM - Client

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Melbourne Lab - Envirolab Services
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Unit 7, 17 Willes Rd, Berrimah, NT 0820
08 8967 1201 | darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	PO No.: 22038
Project Mgr: Dean Stafford	Envirolab Quote No. :
Sampler: Jack Palma	Date results required: Standard
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 155 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample information					Tests Required														Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	TRH/BTEX/ Characterisation	Chromium Reducible Suite	Combo 3							Provide as much information about the sample as you can
1	BH18	0.1	16/12/2022	Soil		x													
2	BH18	0.4	16/12/2022	Soil	x														
3	BH19	0.1	16/12/2022	Soil		x													
4	BH19	0.5	16/12/2022	Soil	x														
5	BH19	1	16/12/2022	Soil								x							
6	BH19	2	16/12/2022	Soil	x														
7	BH19	2.3	16/12/2022	Soil	x														
8	BH20	0.1	16/12/2022	Soil		x													
9	BH20	0.5	16/12/2022	Soil	x														
10	BH20	1	16/12/2022	Soil	x														
11	BH20	2	16/12/2022	Soil	x														
12	BH20	3	16/12/2022	Soil	x														
13	BH21	0.1	16/12/2022	Soil		x													
14	BH21	0.5	16/12/2022	Soil	x														
15	BH21	1	16/12/2022	Soil	x														
16	BH21	2	16/12/2022	Soil	x														
17	BH21	2.8	16/12/2022	Soil								x							
18	BH22	0.1	16/12/2022	Soil	x														
19	BH22	0.5	16/12/2022	Soil		x													
20	BH22	1	16/12/2022	Soil								x							
21	BH22	2	16/12/2022	Soil	x														
22	BH22	2.8	16/12/2022	Soil	x														
23	BH23	0.1	16/12/2022	Soil		x													
24	BH23	1	16/12/2022	Soil	x														
25	BH23	2	16/12/2022	Soil	x														
26	BH23	2.6	16/12/2022	Soil	x														
27	BH46	0.5	16/12/2022	Soil	x														
28	BH46	1	16/12/2022	Soil			x												
29	BH46	2	16/12/2022	Soil	x														
30	BH46	3	16/12/2022	Soil	x														
31	BH47	0.5	16/12/2022	Soil	x														
32	BH47	1	16/12/2022	Soil		x													
33	BH47	2	16/12/2022	Soil	x														
34	BH47	3	16/12/2022	Soil	x														
35	DUP05	-	16/12/2022	Soil			x												
36	DUP06	-	16/12/2022	Soil	x														
—	TRIP05	-	16/12/2022	Soil			x												Please forward to ALS
—	TRIP06	-	16/12/2022	Soil	x														Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus	Received by (Company): ES	Lab Use Only	
Print Name: Jack Palma	Print Name: Christine	Job number: 312927	Cooling: Ice/Ice pack / None
Date & Time: 16/12/2022	Date & Time: 16/12/22 1350	Temperature: 2.4	Security seal: Intact / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

Rec: JC 19/12/22 1630

Environmental Division
Sydney
Work Order Reference
ES2245999

Telephone : +61-2-8784 8555

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2245999**	Page	: 1 of 5
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 19-Dec-2022
Site	:	Issue Date	: 03-Jan-2023
Sampler	: JACK PALMA	No. of samples received	: 2
Order number	: 22038	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075(SIM)S: Phenolic Compound Surrogates	ES2245999-001	TRIP05	**2.4.6-Tribromophenol**	118-79-6	24.9 %	40.0-138 %	**Recovery less than lower data quality objective**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / *Container / Client Sample ID(s)*	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
TRIP05	**16-Dec-2022**	**----**	----	----	**22-Dec-2022**	30-Dec-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TRIP05	**16-Dec-2022**	**23-Dec-2022**	14-Jun-2023	✓	**28-Dec-2022**	14-Jun-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TRIP05	**16-Dec-2022**	**23-Dec-2022**	13-Jan-2023	✓	**28-Dec-2022**	13-Jan-2023	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**03-Jan-2023**	06-Feb-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**03-Jan-2023**	06-Feb-2023	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**03-Jan-2023**	06-Feb-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**03-Jan-2023**	06-Feb-2023	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TRIP05	**16-Dec-2022**	**24-Dec-2022**	30-Dec-2022	✓	**29-Dec-2022**	30-Dec-2022	✓
Soil Glass Jar - Unpreserved (EP071)							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**01-Jan-2023**	06-Feb-2023	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
TRIP05	**16-Dec-2022**	**24-Dec-2022**	30-Dec-2022	✓	**29-Dec-2022**	30-Dec-2022	✓
Soil Glass Jar - Unpreserved (EP071)							
TRIP05	**16-Dec-2022**	**28-Dec-2022**	30-Dec-2022	✓	**01-Jan-2023**	06-Feb-2023	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP05	**16-Dec-2022**	**24-Dec-2022**	30-Dec-2022	✓	**29-Dec-2022**	30-Dec-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

QUALITY CONTROL REPORT

Work Order	: **ES2245999**	Page	: 1 of 10
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 19-Dec-2022
Order number	: 22038	Date Analysis Commenced	: 22-Dec-2022
C-O-C number	: ----	Issue Date	: 03-Jan-2023
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 2		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4787218)									
ES2245712-051	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
ES2245712-063	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	8	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	6	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	13	10	28.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	42	30	35.2	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	73	82	12.3	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4787222)									
ES2245712-053	Anonymous	EA055: Moisture Content	----	0.1	%	13.3	13.9	4.3	0% - 50%
ES2245859-007	Anonymous	EA055: Moisture Content	----	0.1	%	16.2	16.8	3.5	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4787217)									
ES2245712-051	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2245712-063	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4791523)									
ES2245859-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2245922-005	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4791522)									
ES2245859-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2245922-005	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4791522) - continued									
ES2245922-005	Anonymous	EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4791522)									
ES2245859-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2245922-005	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4791522) - continued									
ES2245922-005	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4791521)									
ES2245859-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	1.5	1.6	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	1.7	1.7	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	0.8	0.9	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.8	0.9	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.3	1.4	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.1	1.2	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.7	0.7	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	1.0	1.0	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	8.9	9.4	5.5	0% - 50%
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	1.4	1.5	8.3	No Limit
ES2245922-005	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4791521) - continued									
ES2245922-005	Anonymous	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4791436)									
WN2216373-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
WN2216373-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4791520)									
ES2245859-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	140	120	14.5	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2245922-005	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4791436)									
WN2216373-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
WN2216373-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4791520)									
ES2245859-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	170	110	41.1	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	140	110	20.3	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2245922-005	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 4791436)									
WN2216373-003	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
WN2216373-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4787218)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	98.1	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	124	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	118	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	103	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	106	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	97.2	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4787217)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.1	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4791523)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	79.6	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4791522)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.3	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.6	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.0	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.5	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	76.8	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.1	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	75.7	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	75.2	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	77.8	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	71.4	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.5	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	71.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4791522)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4791522) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	73.6	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	77.4	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	71.9	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	75.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	75.7	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	77.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.9	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	84.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	77.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.3	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	101	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	79.6	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	74.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4791521)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	93.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	97.4	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.8	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	99.8	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	94.1	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	87.9	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	93.9	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	92.5	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	92.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.6	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	89.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	94.2	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	83.4	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	81.0	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	78.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	84.6	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4791436)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	96.6	68.4	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4791520)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	88.8	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	92.9	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	96.0	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791436)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	99.6	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791520)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	95.0	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.7	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	96.2	63.0	131
EP080: BTEXN (QCLot: 4791436)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	111	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	105	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	102	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.2	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	86.1	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4787218)							
ES2245712-051	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	106	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	109	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	109	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	106	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	110	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	108	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	112	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4787217)							
ES2245712-051	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	98.3	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4791523)							
ES2245859-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	96.8	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 4791522)							
ES2245859-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	112	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	92.6	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	91.7	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	99.1	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	99.1	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	90.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4791522)							
ES2245859-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	77.9	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	88.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	82.5	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	88.6	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	74.4	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4791521)							
ES2245859-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.2	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	94.0	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4791436)							
WN2216373-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	73.4	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4791520)							
ES2245859-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	124	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	123	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	123	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791436)							
WN2216373-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	73.7	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791520)							
ES2245859-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	118	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	124	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	119	52.0	132
EP080: BTEXN (QCLot: 4791436)							
WN2216373-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	76.9	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	75.5	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	82.4	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	82.7	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	84.3	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	72.2	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2245999**	Page	: 1 of 7
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 19-Dec-2022 16:30
Order number	: 22038	Date Analysis Commenced	: 22-Dec-2022
C-O-C number	: ----	Issue Date	: 03-Jan-2023 18:36
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 2		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP075(SIM): Surrogate recovery bias low due to sample matrix interferences.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP05	----	----	----	----
				Sampling date / time	16-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2245999-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**8.8**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		**13**	----	----	----	----
Copper	7440-50-8	5	mg/kg		**25**	----	----	----	----
Lead	7439-92-1	5	mg/kg		**43**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		**9**	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**48**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		**0.19**	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP05	----	----	----	----
				Sampling date / time	16-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2245999-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		**0.19**	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		**0.8**	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		**2.1**	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		**3.2**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP05	----	----	----	----
				Sampling date / time	16-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2245999-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		**1.3**	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		**1.2**	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		**1.4**	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		**0.5**	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**1.3**	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		**0.6**	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		**0.7**	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		**13.1**	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		**1.7**	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**1.9**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**2.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		**110**	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		**240**	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**350**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		**260**	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		**210**	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**470**	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP05	----	----	----	----
				Sampling date / time	16-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2245999-001	--------	--------	--------	--------	
				Result	----	----	----	----	
EP080: BTEXN - Continued									
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----	
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	----	----	
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----	
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%	**62.2**	----	----	----	----	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%	**82.8**	----	----	----	----	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%	**99.0**	----	----	----	----	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%	**82.2**	----	----	----	----	
2-Chlorophenol-D4	93951-73-6	0.5	%	**82.8**	----	----	----	----	
2.4.6-Tribromophenol	118-79-6	0.5	%	**24.9**	----	----	----	----	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%	**87.1**	----	----	----	----	
Anthracene-d10	1719-06-8	0.5	%	**82.8**	----	----	----	----	
4-Terphenyl-d14	1718-51-0	0.5	%	**90.4**	----	----	----	----	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**106**	----	----	----	----	
Toluene-D8	2037-26-5	0.2	%	**102**	----	----	----	----	
4-Bromofluorobenzene	460-00-4	0.2	%	**84.3**	----	----	----	----	

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2244672**

Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: deanstafford@reditus.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 22038	Page	: 1 of 2
Order number	: 22038	Quote number	: ES2019REDITUS0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	:		
Sampler	: JACK PALMA		

Dates

Date Samples Received	: 09-Dec-2022 16:00	Issue Date	: 09-Dec-2022
Client Requested Due Date	: 16-Dec-2022	Scheduled Reporting Date	: **16-Dec-2022**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 6.2'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2244672-001	07-Dec-2022 00:00	TRIP04	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

Dean Stafford

- *AU Certificate of Analysis - NATA (COA)	Email	deanstafford@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	deanstafford@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	deanstafford@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	deanstafford@reditus.com.au
- A4 - AU Tax Invoice (INV)	Email	deanstafford@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	deanstafford@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	deanstafford@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	deanstafford@reditus.com.au

Esdat Deliverables

- EDI Format - ESDAT (ESDAT)	Email	reditusconsulting@esdat.com.au

JACK PALMA

- *AU Certificate of Analysis - NATA (COA)	Email	jackpalma@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jackpalma@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jackpalma@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jackpalma@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	jackpalma@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	jackpalma@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	jackpalma@reditus.com.au

CHAIN OF CUSTODY FORM - Client

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ENVIROLAB GROUP
National phone number 1300 424 344

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
02 9910 6200 | sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt, Myaree, WA 6154
08 9317 2505 | lab@mpl.com.au

Melbourne Lab - Envirolab Services
25 Research Drive, Croydon South, VIC 3136
03 9763 2500 | melbourne@envirolab.com.a

Adelaide Office - Envirolab Services
7a The Parade, Norwood, SA 5067
08 7087 6800 | adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
20a, 10-20 Depot St, Banyo, QLD 4014
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Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
08 8967 1201 | darwin@envirolab.com.au

Environmental Division Sydney
Work Order Reference
ES2244672

Telephone : +61-2-8784 8555

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No. :
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Date results required: Standard Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 657 155 0408 988 954	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Sample information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	PFAS Chl. Characterisation	Chromium Reducible Suite									Provide as much information about the sample as you can
1	BH12	0.1	07/12/2022	Soil		X														
2	BH12	0.5	07/12/2022	Soil			X													
3	BH12	1	07/12/2022	Soil	X															
4	BH12	2	07/12/2022	Soil						X										
5	BH12	3	07/12/2022	Soil	X															
6	BH12	4	07/12/2022	Soil							X									
7	BH12	5	07/12/2022	Soil							X									
8	BH12	6	07/12/2022	Soil	X															
9	BH12	7	07/12/2022	Soil	X															
10	BH12	8	07/12/2022	Soil	X															
11	BH15	0.1	07/12/2022	Soil		X														
12	BH15	0.5	07/12/2022	Soil			X													
13	BH15	1	07/12/2022	Soil	X															
14	BH15	2	07/12/2022	Soil	X															
15	BH15	3	07/12/2022	Soil							X									
16	BH15	4	07/12/2022	Soil							X									
17	BH15	5	07/12/2022	Soil	X															
18	BH15	6	07/12/2022	Soil	X															
19	BH35	0.5	07/12/2022	Soil		X														
20	BH35	0.7	07/12/2022	Soil			X													
21	BH36	0.25	07/12/2022	Soil		X														
22	BH36	0.4	07/12/2022	Soil			X													
23	BH44	0.25	07/12/2022	Soil		X														
24	BH44	0.35	07/12/2022	Soil			X													
25	BH45	0.2	07/12/2022	Soil		X														
26	BH45	0.5	07/12/2022	Soil			X													
27	DUP04	-	07/12/2022	Soil			X													
—	TRIP04	-	07/12/2022	Soil			X													Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus		Received by (Company): ES STD	Lab Use Only
Print Name: Jack Palma		Print Name: MTL	Job number: 312652
Date & Time: 08/12/2022		Date & Time: 9/12/2022 16:30	Temperature: 14°C
Signature:		Signature: MTL	TAT Req - SAME day / 1 / 2 / 3 / 4 / (STD)
			Cooling: (Ice) / Ice pack / None
			Security seal: (Intact) / Broken / None

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

Job No: 312652
Date Received: 8/12/2022
Time Received: 16:30
Received By: MTL
Temp: Cool / Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

28 - extra BH16 - 0.1 (1)

3 extras

Rec: 2 09/12/22 16:00

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2244672**	Page	: 1 of 5
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 09-Dec-2022
Site	:	Issue Date	: 19-Dec-2022
Sampler	: JACK PALMA	No. of samples received	: 1
Order number	: 22038	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
TRIP04	**07-Dec-2022**	**----**	----	----	**14-Dec-2022**	21-Dec-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	05-Jun-2023	✓	**16-Dec-2022**	05-Jun-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	04-Jan-2023	✓	**16-Dec-2022**	04-Jan-2023	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	23-Jan-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	23-Jan-2023	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	23-Jan-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**15-Dec-2022**	23-Jan-2023	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**15-Dec-2022**	23-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	21-Dec-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**15-Dec-2022**	23-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	21-Dec-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP04	**07-Dec-2022**	**14-Dec-2022**	21-Dec-2022	✓	**16-Dec-2022**	21-Dec-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

QUALITY CONTROL REPORT

Work Order	: **ES2244672**	Page	: 1 of 10
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 09-Dec-2022
Order number	: 22038	Date Analysis Commenced	: 14-Dec-2022
C-O-C number	: ----	Issue Date	: 19-Dec-2022
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4767992)									
ES2244614-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	7	7	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	9	11.2	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	23	21	10.0	No Limit
ES2244699-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	14	18.6	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	9	16.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	6	22.8	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	16	13	20.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4767998)									
ES2244614-003	Anonymous	EA055: Moisture Content	----	0.1	%	24.0	22.1	8.0	0% - 20%
ES2244699-010	Anonymous	EA055: Moisture Content	----	0.1	%	6.5	6.6	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4767991)									
ES2244513-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2244614-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4767025)									
ES2244614-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4767024)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4767024) - continued									
ES2244614-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4767024)									
ES2244614-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4767024) - continued									
ES2244614-001	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4767023)									
ES2244614-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4767022)									
ES2244708-003	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244614-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4767350)									
ES2244505-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2244505-009	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4767022)									
ES2244708-003	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244614-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4767350)									
ES2244505-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2244505-009	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4767350)									
ES2244505-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2244505-009	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4767992)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	95.7	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	128	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	105	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	96.6	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	96.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	87.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4767991)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	92.0	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4767025)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	74.2	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4767024)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.1	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	105	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.8	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	96.2	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4767024)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4767024) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	83.1	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	95.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	88.3	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.3	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	87.8	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.8	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.0	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	64.0	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4767023)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	92.8	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	105	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	102	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	104	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	99.1	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	108	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	101	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	102	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	108	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	102	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	105	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4767022)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	85.1	75.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	LCS: Spike Recovery (%)	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4767022) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	95.2	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	92.7	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4767350)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	104	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4767022)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	93.7	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	92.4	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	92.0	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4767350)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	108	68.4	128
EP080: BTEXN (QCLot: 4767350)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	106	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	111	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	110	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	100	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4767992)							
ES2244614-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	99.8	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	93.1	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	104	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	103	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	103	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	100	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4767991)							
ES2244512-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	93.2	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4767025)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4767025) - continued							
ES2244614-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	89.0	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4767024)							
ES2244614-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	75.8	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	82.8	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	74.0	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	85.4	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	85.5	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	102	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4767024)							
ES2244614-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	86.8	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	86.7	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	94.4	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	90.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	76.5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4767023)							
ES2244614-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.0	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	106	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4767022)							
ES2244614-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	123	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	108	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	115	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4767350)							
ES2244505-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	115	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4767022)							
ES2244614-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	107	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	115	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	107	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4767350)							
ES2244505-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	117	70.0	130
EP080: BTEXN (QCLot: 4767350)							
ES2244505-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	96.2	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	102	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	105	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	105	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	102	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 4767350) - continued							
ES2244505-001	Anonymous	EP080: Naphthalene	91-20-3	2.5 mg/kg	97.2	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2244672**	Page	: 1 of 7
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 09-Dec-2022 16:00
Order number	: 22038	Date Analysis Commenced	: 14-Dec-2022
C-O-C number	: ----	Issue Date	: 19-Dec-2022 10:49
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP04	----	----	----	----
				Sampling date / time	07-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244672-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		10.7	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		7	----	----	----	----
Copper	7440-50-8	5	mg/kg		10	----	----	----	----
Lead	7439-92-1	5	mg/kg		31	----	----	----	----
Nickel	7440-02-0	2	mg/kg		2	----	----	----	----
Zinc	7440-66-6	5	mg/kg		47	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP04	----	----	----	----
				Sampling date / time	07-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244672-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		**0.6**	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		**1.0**	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		**1.0**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP04	----	----	----	----
				Sampling date / time	07-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244672-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		**0.5**	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		**3.1**	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		**0.5**	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.8**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP04	----	----	----	----
				Sampling date / time	07-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244672-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**112**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**85.5**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**52.3**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**94.5**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**98.7**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**78.4**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**92.7**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**110**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**95.8**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**78.2**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**109**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**97.6**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2244462**

Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: deanstafford@reditus.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 22038	Page	: 1 of 2
Order number	: 22038	Quote number	: ES2019REDITUS0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	:		
Sampler	: JACK PALMA		

Dates

Date Samples Received	: 08-Dec-2022 15:35	Issue Date	: 12-Dec-2022
Client Requested Due Date	: 15-Dec-2022	Scheduled Reporting Date	: **15-Dec-2022**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 6.9'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2244462-001	05-Dec-2022 00:00	TRIP01	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS		
- A4 - AU Tax Invoice (INV)	Email	accounts@reditusconsulting.com
Dean Stafford		
- *AU Certificate of Analysis - NATA (COA)	Email	deanstafford@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	deanstafford@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	deanstafford@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	deanstafford@reditus.com.au
- A4 - AU Tax Invoice (INV)	Email	deanstafford@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	deanstafford@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	deanstafford@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	deanstafford@reditus.com.au
Esdat Deliverables		
- EDI Format - ESDAT (ESDAT)	Email	reditusconsulting@esdat.com.au
JACK PALMA		
- *AU Certificate of Analysis - NATA (COA)	Email	jackpalma@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jackpalma@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jackpalma@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jackpalma@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	jackpalma@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	jackpalma@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	jackpalma@reditus.com.au

CHAIN OF CUSTODY FORM - Client

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National phone number 1300 424 344

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Unit 7 - 17 Willes Rd, Berrimah, NT 0820
08 8567 1201 | darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Dean Stafford / Jack Palma	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Jack Palma	Envirolab Quote No.:
Address: 1A / 29-33 Waratah Street Kirrawee NSW	Date results required: Standard
	Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0434 557 155 0406 988 954	Additional report format: esdat
Email Invoice To: accounts@redituscconsulting.com deanstafford@reditus.com.au	Lab Comments:
Email Results To: deanstafford@reditus.com.au jackpalma@reditus.com.au	

Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	NEPM EIL Characterisation	Chromium Reducible Suite	Analyse	Comments: Provide as much information about the sample as you can
1	BH03	0.15	5/12/2022	Soil		X		X					
2	BH03	0.5	5/12/2022	Soil			X						
3	BH03	1	5/12/2022	Soil	X								
4	BH03	2	5/12/2022	Soil	X								
5	BH03	3	5/12/2022	Soil	X								
6	BH04	0.15	5/12/2022	Soil		X							
7	BH04	0.5	5/12/2022	Soil			X						
8	BH04	1	5/12/2022	Soil						X			
9	BH04	2	5/12/2022	Soil	X								
10	BH04	3	5/12/2022	Soil	X								
11	BH05	0.1	5/12/2022	Soil		X							
12	BH05	0.5	5/12/2022	Soil	X								
13	BH05	1	5/12/2022	Soil			X						
14	BH05	2	5/12/2022	Soil	X								
15	BH05	3	5/12/2022	Soil							X		
16	BH05	4	5/12/2022	Soil							X		
17	BH05	5	5/12/2022	Soil	X								
18	BH05	6	5/12/2022	Soil	X								
19	BH05	7	5/12/2022	Soil	X								
20	BH06	0.1	5/12/2022	Soil		X		X					
21	BH06	0.5	5/12/2022	Soil			X						
22	BH06	1	5/12/2022	Soil	X								
23	BH05	2	5/12/2022	Soil	X								
24	BH07	0.1	5/12/2022	Soil		X							
25	BH07	0.5	5/12/2022	Soil	X								
26	BH07	1	5/12/2022	Soil	X								
27	BH07	2	5/12/2022	Soil	X								
28	BH07	3	5/12/2022	Soil			X						
29	BH07	4	5/12/2022	Soil	X								
30	BH07	5	5/12/2022	Soil	X								
31	BH07	6	5/12/2022	Soil	X								
32	BH08	0.1	5/12/2022	Soil		X							
33	BH08	0.5	5/12/2022	Soil			X						
34	BH08	1	5/12/2022	Soil	X								
35	BH08	2	5/12/2022	Soil	X								
36	BH08	3	5/12/2022	Soil	X								
37	BH34	0.1	5/12/2022	Soil		X							
38	BH34	0.5	5/12/2022	Soil		X							
39	BH34	1	5/12/2022	Soil	X								
40	BH34	1.5	5/12/2022	Soil	X								
41	DUP01	-	5/12/2022	Soil			X						
42	TRIP01	-	5/12/2022	Soil			X						
43	Trip Blank 1	-	5/12/2022	Soil								X	Please forward to ALS

Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis.

Relinquished by (Company): Reditus		Received by (Company): ES	Lab Use Only
Print Name: Jack Palma		Print Name: Thomas Hall	Job number: ES2244462
Date & Time: 6/12/2022		Date & Time: 6/12/22 15:30	Temperature: 10°C Cooling: Ice / Ice pack / None
Signature:		Signature:	Security seal: Intact / Broken / None
			TAT Req - SAME day / 1 / 2 / 3 / 4 / STD

46 BH06 5.0
43 BH07 7.0

Rec'd 6/12/22 1535

COC 7/12/22
COC

Environmental Division
Sydney
Work Order Reference
ES2244462

Telephone : +61-2-8784 8555

QUALITY CONTROL REPORT

Work Order	: **ES2244462**	Page	: 1 of 10
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022
Order number	: 22038	Date Analysis Commenced	: 12-Dec-2022
C-O-C number	: ----	Issue Date	: 15-Dec-2022
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4765010)									
ES2244393-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	15	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	7	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	8	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	56	62	9.6	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	457	482	5.4	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	342	362	5.8	0% - 20%
ES2244407-004	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	31	34.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	18	27	37.7	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	11	22.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	11	16	33.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	8	34.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	48	32.2	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4765018)									
ES2244446-012	Anonymous	EA055: Moisture Content	----	0.1	%	6.5	6.5	0.0	No Limit
ES2244460-001	Anonymous	EA055: Moisture Content	----	0.1	%	17.0	17.2	0.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4765009)									
ES2244393-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
ES2244407-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4762949)									
ES2244454-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4762952)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4762952) - continued									
ES2244454-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4762952)									
ES2244454-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4762952) - continued									
ES2244454-001	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4762951)									
ES2244664-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2244454-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4762951) - continued									
ES2244454-001	Anonymous	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4762950)									
ES2244664-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244454-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4763954)									
ES2244460-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4762950)									
ES2244664-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244454-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4763954)									
ES2244460-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4763954)									
ES2244460-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4765010)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	113	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	91.4	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	132	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	98.4	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	91.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	106	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4765009)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	104	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	113	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4762952)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.0	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	83.7	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	78.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	92.3	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	84.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	60.6	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4762951)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	92.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	106	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	107	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.5	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.2	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.9	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	96.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	99.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	91.8	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	90.1	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	68.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	68.3	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	69.6	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	111	75.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	97.2	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	114	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4763954)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	107	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4762950)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	101	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	110	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	106	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4763954)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	110	68.4	128
EP080: BTEXN (QCLot: 4763954)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.7	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	105	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	106	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	104	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	96.4	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4765010)							
ES2244393-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	86.2	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.7	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4765009)							
ES2244393-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949) - continued							
ES2244454-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	2 mg/kg	97.8	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4762952)							
ES2244454-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	111	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	99.5	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	107	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	109	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	92.9	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	106	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952)							
ES2244454-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	92.1	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	103	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	114	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	112	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	101	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4762951)							
ES2244454-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	103	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	97.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950)							
ES2244454-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	112	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	115	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	124	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4763954)							
ES2244460-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	99.7	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4762950)							
ES2244454-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	120	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	120	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4763954)							
ES2244460-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	70.0	130
EP080: BTEXN (QCLot: 4763954)							
ES2244460-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	78.9	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	88.4	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	93.0	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	92.0	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	94.2	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 4763954) - continued							
ES2244460-001	Anonymous	EP080: Naphthalene	91-20-3	2.5 mg/kg	83.7	70.0	130

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2244462**	Page	: 1 of 5
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022
Site	:	Issue Date	: 15-Dec-2022
Sampler	: JACK PALMA	No. of samples received	: 1
Order number	: 22038	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
TRIP01	**05-Dec-2022**	**----**	----	----	**13-Dec-2022**	19-Dec-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TRIP01	**05-Dec-2022**	**13-Dec-2022**	03-Jun-2023	✓	**15-Dec-2022**	03-Jun-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TRIP01	**05-Dec-2022**	**13-Dec-2022**	02-Jan-2023	✓	**15-Dec-2022**	02-Jan-2023	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)							
TRIP01	**05-Dec-2022**	**13-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	19-Dec-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
TRIP01	**05-Dec-2022**	**12-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)							
TRIP01	**05-Dec-2022**	**13-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	19-Dec-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP01	**05-Dec-2022**	**13-Dec-2022**	19-Dec-2022	✓	**14-Dec-2022**	19-Dec-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	**11.76**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2244462**	Page	: 1 of 7
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022 15:35
Order number	: 22038	Date Analysis Commenced	: 12-Dec-2022
C-O-C number	: ----	Issue Date	: 15-Dec-2022 17:57
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP01	----	----	----	----
				Sampling date / time	05-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244462-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		20.2	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		10	----	----	----	----
Copper	7440-50-8	5	mg/kg		23	----	----	----	----
Lead	7439-92-1	5	mg/kg		20	----	----	----	----
Nickel	7440-02-0	2	mg/kg		12	----	----	----	----
Zinc	7440-66-6	5	mg/kg		160	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP01	----	----	----	----
				Sampling date / time	05-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244462-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP01	----	----	----	----
				Sampling date / time	05-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244462-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		**120**	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		**130**	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**250**	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		**200**	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		**100**	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**300**	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP01	----	----	----	----
				Sampling date / time	05-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2244462-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**110**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**119**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**133**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**84.8**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**94.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**69.4**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**85.6**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**103**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**108**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**86.5**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**97.8**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**101**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2244460**

Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
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Telephone	: ----	Telephone	: +61-2-8784 8555
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Project	: 22038	Page	: 1 of 2
Order number	: 22038	Quote number	: ES2019REDITUS0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	:		
Sampler	: JACK PALMA		

Dates

Date Samples Received	: 08-Dec-2022 15:35	Issue Date	: 12-Dec-2022
Client Requested Due Date	: 15-Dec-2022	Scheduled Reporting Date	: **15-Dec-2022**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 6.9'C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 2 / 2

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-16 TRH/BTEXN/PAH/OC/OP/PCB/8Metals
ES2244460-001	06-Dec-2022 00:00	TRIP02	✓	✓
ES2244460-002	06-Dec-2022 00:00	TRIP03	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS

- A4 - AU Tax Invoice (INV)	Email	accounts@reditusconsulting.com

Dean Stafford

- *AU Certificate of Analysis - NATA (COA)	Email	deanstafford@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	deanstafford@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	deanstafford@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	deanstafford@reditus.com.au
- A4 - AU Tax Invoice (INV)	Email	deanstafford@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	deanstafford@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	deanstafford@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	deanstafford@reditus.com.au

Esdat Deliverables

- EDI Format - ESDAT (ESDAT)	Email	reditusconsulting@esdat.com.au

JACK PALMA

- *AU Certificate of Analysis - NATA (COA)	Email	jackpalma@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jackpalma@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jackpalma@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jackpalma@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	jackpalma@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	jackpalma@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	jackpalma@reditus.com.au

CHAIN OF CUSTODY FORM - Client

ENVIROLAB / ENVIROLAB Office / mpl

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National phone number 1300 424 344

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Perth Lab - MPL Laboratories
16-18 Hayden Crt, Myaree, WA 6154
P: 08 9317 2505 | E: lab@mpl.com.au

Melbourne Lab - Envirolab Services
25 Research Drive, Croydon South, VIC 3136
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7a The Parade, Norwood, SA 5067
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Brisbane Office - Envirolab Services
20a 10-20 Depot St, Banyo, QLD 4014
P: 07 3266 9532 | E: brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0828
P: 08 8967 1201 | E: darwin@envirolab.com.au

Client: Reditus Consulting		Client Project Name/Number/Site etc (ie report title):	22038
Contact Person: Dean Stafford / Jack Palma		PO No.: 22038	
Project Mgr: Dean Stafford		Envirolab Quote No. :	
Sampler: Jack Palma		Date results required:	Standard
Address: 1A / 29-33 Waratah Street Kirrawee NSW		Or choose: standard / same day / 1 day / 2 day / 3 day *Note: inform lab in advance if urgent turnaround is required - surcharges apply*	
Phone: 02 9521 6667	Mob: 0434 657 155 0408 988 954	Additional report format: esdat	
Email Invoice To:	accounts@reditusconsulting.com deanstafford@reditus.com.au	Lab Comments:	
Email Results To:	deanstafford@reditus.com.au jackpalma@reditus.com.au		

Environmental Division
Sydney
Work Order Reference
ES2244460

Telephone : +61-2-8784 8555

Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Hold	Combo 6a	Combo 6	PFAS (28 analytes)	VOC	TRPH C6-C10 Characterisation	Chromium Reducible Suite	Analyse	Comments
1	BH09	0.1	6/12/2022	Soil		x		x					Provide as much information about the sample as you can
2	BH09	0.5	6/12/2022	Soil	x								
3	BH09	1	6/12/2022	Soil	x								
4	BH09	2	6/12/2022	Soil			x				x		
5	BH09	3	6/12/2022	Soil	x								
6	BH09	4	6/12/2022	Soil							x		
7	BH09	5	6/12/2022	Soil							x		
8	BH09	6	6/12/2022	Soil	x								
9	BH09	7	6/12/2022	Soil	x								
10	BH13	0.1	6/12/2022	Soil		x		x					
11	BH13	0.5	6/12/2022	Soil	x								
12	BH13	1	6/12/2022	Soil	x								
13	BH13	1.6	6/12/2022	Soil	x								
14	BH13	2.7	6/12/2022	Soil			x						
15	BH14	0.1	6/12/2022	Soil		x							
16	BH14	0.5	6/12/2022	Soil			x						
17	BH14	1	6/12/2022	Soil	x								
18	BH14	2	6/12/2022	Soil	x								
19	BH14	2.5	6/12/2022	Soil	x								
20	BH16	0.1	6/12/2022	Soil		x							
21	BH16	0.5	6/12/2022	Soil			x						
22	BH16	1	6/12/2022	Soil	x								
23	BH16	2	6/12/2022	Soil	x								
24	BH16	3	6/12/2022	Soil	x								
25	BH17	0.1	6/12/2022	Soil		x							
26	BH17	0.5	6/12/2022	Soil			x						
27	BH17	1	6/12/2022	Soil	x								
28	BH17	2	6/12/2022	Soil						x			
29	BH17	2.5	6/12/2022	Soil	x								
30	BH24	0.1	6/12/2022	Soil		x		x					
31	BH24	0.5	6/12/2022	Soil			x						
32	BH24	1	6/12/2022	Soil	x								
33	BH24	2	6/12/2022	Soil	x								
34	BH24	3	6/12/2022	Soil	x								
35	BH25	0.1	6/12/2022	Soil		x							
36	BH25	0.5	6/12/2022	Soil			x						
37	BH25	1	6/12/2022	Soil	x								
38	BH25	2	6/12/2022	Soil	x								
39	BH25	3	6/12/2022	Soil	x								
40	BH26	0.1	6/12/2022	Soil		x							
41	BH26	0.5	6/12/2022	Soil			x						
42	BH26	1	6/12/2022	Soil	x								
43	BH26	2	6/12/2022	Soil	x								
44	BH26	3	6/12/2022	Soil	x								
45	BH27	0.1	6/12/2022	Soil		x							
46	BH27	0.5	6/12/2022	Soil			x						
47	BH27	1	6/12/2022	Soil						x			
48	BH27	2	6/12/2022	Soil	x								
49	BH30	0.1	6/12/2022	Soil		x							
50	BH30	0.3	6/12/2022	Soil	x								
51	BH30	0.5	6/12/2022	Soil	x								
52	BH30	1	6/12/2022	Soil			x						
53	BH30	2	6/12/2022	Soil	x								
54	BH30	3	6/12/2022	Soil	x								
55	BH33	0.1	6/12/2022	Soil		x							
56	BH33	0.5	6/12/2022	Soil			x						
57	BH33	1	6/12/2022	Soil	x								
58	BH33	2	6/12/2022	Soil	x								
59	BH33	3	6/12/2022	Soil	x								
60	BH42	0.1	6/12/2022	Soil		x							
61	BH43	0.1	6/12/2022	Soil		x							
62	BH43	0.3	6/12/2022	Soil			x						
63	DUP02	-	6/12/2022	Soil			x						
64	DUP03	-	6/12/2022	Soil			x						
—	TRIP02	-	6/12/2022	Soil			x						Please forward to ALS
—	TRIP03	-	6/12/2022	Soil			x						Please forward to ALS

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus		Received by (Company):	ES STD	Lab Use Only	
Print Name: Jack Palma		Print Name:	WPL	Job number: 224446	Cooling: Ice / Ice pack / None
Date & Time: 7/12/2022	05:11pm 1220	Date & Time:	7/12/2022 10:50	Temperature: 19°C	Security seal: Intact / Broken / None
Signature:		Signature:		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 224446
Date Received: 7/12/2022
Time Received: 10:50
Received by: WPL
Temp: 19°C
Cooling: Ice/Pack
Security: Intact/Broken/None

65 extra BH13 2.0

COC 7/12/22

1000

Rec: d ▷ 08/12/22 15:35

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2244460**	Page	: 1 of 5
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022
Site	:	Issue Date	: 15-Dec-2022
Sampler	: JACK PALMA	No. of samples received	: 2
Order number	: 22038	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
TRIP02,	TRIP03	**06-Dec-2022**	**----**	----	----	**13-Dec-2022**	20-Dec-2022	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
TRIP02,	TRIP03	**06-Dec-2022**	**13-Dec-2022**	04-Jun-2023	✓	**15-Dec-2022**	04-Jun-2023	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
TRIP02,	TRIP03	**06-Dec-2022**	**13-Dec-2022**	03-Jan-2023	✓	**15-Dec-2022**	03-Jan-2023	✓
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**15-Dec-2022**	21-Jan-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071)								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)								
TRIP02,	TRIP03	**06-Dec-2022**	**13-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	20-Dec-2022	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP071)								
TRIP02,	TRIP03	**06-Dec-2022**	**12-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	21-Jan-2023	✓
Soil Glass Jar - Unpreserved (EP080)								
TRIP02,	TRIP03	**06-Dec-2022**	**13-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	20-Dec-2022	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP02, TRIP03	**06-Dec-2022**	**13-Dec-2022**	20-Dec-2022	✓	**14-Dec-2022**	20-Dec-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	17	**11.76**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.

QUALITY CONTROL REPORT

Work Order	: **ES2244460**	Page	: 1 of 10
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022
Order number	: 22038	Date Analysis Commenced	: 12-Dec-2022
C-O-C number	: ----	Issue Date	: 15-Dec-2022
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 2		
No. of samples analysed	: 2		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 4765010)									
ES2244393-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	15	15	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	7	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	8	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	56	62	9.6	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	457	482	5.4	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	342	362	5.8	0% - 20%
ES2244407-004	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	31	34.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	18	27	37.7	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	11	22.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	11	16	33.4	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	8	34.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	34	48	32.2	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4765018)									
ES2244446-012	Anonymous	EA055: Moisture Content	----	0.1	%	6.5	6.5	0.0	No Limit
ES2244460-001	TRIP02	EA055: Moisture Content	----	0.1	%	17.0	17.2	0.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4765009)									
ES2244393-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
ES2244407-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4762949)									
ES2244454-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4762952)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4762952) - continued									
ES2244454-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4762952)									
ES2244454-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 4762952) - continued									
ES2244454-001	Anonymous	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4762951)									
ES2244664-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2244454-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 4762951) - continued									
ES2244454-001	Anonymous	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4762950)									
ES2244664-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244454-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4763954)									
ES2244460-001	TRIP02	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4762950)									
ES2244664-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2244454-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4763954)									
ES2244460-001	TRIP02	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 4763954)									
ES2244460-001	TRIP02	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4765010)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	113	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	91.4	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	132	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	98.4	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	91.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	106	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4765009)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	104	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	113	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4762952)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	103	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	104	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	103	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.9	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.0	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	83.7	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	85.2	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	78.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	92.3	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	84.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	106	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	105	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	60.6	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4762951)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	92.1	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	106	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	107	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.5	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.2	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	98.9	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	96.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	99.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	91.8	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	90.1	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	96.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	68.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	68.3	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	69.6	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	111	75.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	LCS: Spike Recovery (%)	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950) - continued								
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	97.2	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	114	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4763954)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	107	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4762950)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	101	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	110	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	106	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4763954)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	110	68.4	128
EP080: BTEXN (QCLot: 4763954)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.7	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	105	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	106	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	104	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	96.4	63.0	119

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4765010)							
ES2244393-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	98.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	86.2	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.3	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	97.7	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4765009)							
ES2244393-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4762949) - continued							
ES2244454-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	2 mg/kg	97.8	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4762952)							
ES2244454-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	111	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	99.5	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	107	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	109	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	92.9	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	106	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4762952)							
ES2244454-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	92.1	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	103	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	114	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	112	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	101	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4762951)							
ES2244454-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	103	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	97.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4762950)							
ES2244454-001	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	112	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	115	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	124	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4763954)							
ES2244460-001	TRIP02	EP080: C6 - C9 Fraction	----	32.5 mg/kg	99.7	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4762950)							
ES2244454-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	114	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	120	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	120	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4763954)							
ES2244460-001	TRIP02	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	102	70.0	130
EP080: BTEXN (QCLot: 4763954)							
ES2244460-001	TRIP02	EP080: Benzene	71-43-2	2.5 mg/kg	78.9	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	88.4	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	93.0	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	92.0	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	94.2	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 4763954) - continued							
ES2244460-001	TRIP02	EP080: Naphthalene	91-20-3	2.5 mg/kg	83.7	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2244460**	Page	: 1 of 7
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 08-Dec-2022 15:35
Order number	: 22038	Date Analysis Commenced	: 12-Dec-2022
C-O-C number	: ----	Issue Date	: 15-Dec-2022 17:57
Sampler	: JACK PALMA		
Site	:		
Quote number	: EN/222		
No. of samples received	: 2		
No. of samples analysed	: 2		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP068: Positive result has been confirmed by re-extraction and re-analysis.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TRIP02	TRIP03	----	----	----
			Sampling date / time	06-Dec-2022 00:00	06-Dec-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2244460-001	ES2244460-002	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**17.0**	**14.2**	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**7**	**5**	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**24**	**8**	----	----	----
Copper	7440-50-8	5	mg/kg	**24**	**23**	----	----	----
Lead	7439-92-1	5	mg/kg	**24**	**19**	----	----	----
Nickel	7440-02-0	2	mg/kg	**8**	**7**	----	----	----
Zinc	7440-66-6	5	mg/kg	**18**	**102**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	**0.09**	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TRIP02	TRIP03	----	----	----
			Sampling date / time	06-Dec-2022 00:00	06-Dec-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2244460-001	ES2244460-002	--------	--------	--------
				Result	Result	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	**0.09**	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP02	TRIP03	----	----	----
				Sampling date / time	06-Dec-2022 00:00	06-Dec-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2244460-001	ES2244460-002	--------	--------	--------
					Result	Result	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TRIP02	TRIP03	----	----	----
			Sampling date / time	06-Dec-2022 00:00	06-Dec-2022 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2244460-001	ES2244460-002	--------	--------	--------
				Result	Result	----	----	----
EP080: BTEXN - Continued								
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	----	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	103	110	----	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	120	66.4	----	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	112	89.7	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	82.1	83.6	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	90.9	95.0	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	65.3	67.6	----	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	81.3	84.6	----	----	----
Anthracene-d10	1719-06-8	0.5	%	99.8	103	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	102	105	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	88.8	99.2	----	----	----
Toluene-D8	2037-26-5	0.2	%	103	110	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	107	115	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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SAMPLE RECEIPT ADVICE

Client Details

Client	Reditus Consulting
Attention	Jack Palma, Kyle Sier, Dean Stafford

Sample Login Details

Your reference	22038
Envirolab Reference	313723
Date Sample Received	21/12/2022
Date Instructions Received	21/12/2022
Date Results Expected to be Reported	09/01/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	14 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
Cooling Method	Ice
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:

Envirolab Services Pty Ltd
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Sample ID	VOCs in water	PFAS in Waters Extended	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHsin Water	Organochlorine Pesticides in Water	OP Pesticides in Water	PCBs in Water	Total Phenolicsin Water	HM in water - dissolved	Total Cyanide
MW01	✓		✓	✓	✓					✓	
MW02	✓		✓	✓	✓					✓	
MW03	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW04	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW05	✓		✓	✓	✓					✓	
MW06	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW07	✓		✓	✓	✓					✓	
MW08	✓		✓	✓	✓					✓	
EW1	✓		✓	✓	✓					✓	
EW2	✓		✓	✓	✓					✓	
EW3	✓		✓	✓	✓					✓	
DUP1			✓	✓	✓					✓	
Trip Spike			✓								
Trip Blank			✓								

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.

CHAIN OF CUSTODY FORM - Client

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ENVIROLAB GROUP
National phone number 1300 424 344

Sydney Lab - Envirolab Services
12 Ashley St, Chatswood, NSW 2067
02 9910 6200 | sydney@envirolab.com.au

Perth Lab - MPL Laboratories
16-18 Hayden Crt, Myaree, WA 6154
08 9317 2505 | lab@mpl.com.au

Melbourne Lab - Envirolab Services
25 Research Drive, Croydon South, VIC 3136
03 9763 2500 | melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
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20a, 10-20 Depot St, Banyo, QLD 4014
07 3266 9532 | brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 7, 17 Willes Rd, Berrimah, NT 0820
08 8967 1201 | darwin@envirolab.com.au

Client: Reditus Consulting	Client Project Name/Number/Site etc (ie report title): 22038
Contact Person: Kyle Sier	
Project Mgr: Dean Stafford	PO No.: 22038
Sampler: Kyle Sier	Envirolab Quote No. :
Address: Unit 1A, Level 1, 29-33 Waratah Street Kirrawee NSW	Date results required: standard Or choose: standard / same day / 1 day / 2 day / 3 day *Note: Inform lab in advance if urgent turnaround is required - surcharges apply*
Phone: 02 9521 6567 Mob: 0478117515	Additional report format: esdat
Email Invoice To: accounts@reditusconsulting.com	Lab Comments:
Email Results To: kylesier@reditus.com.au, deanstafford@reditus.com.au, jackpalma@reditus.com.au	

Sample Information					Tests Required															Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 10	VOCs	PFAS (standard suite)	Analyse (TRH/BTEX)											Provide as much information about the sample as you can
1	MW01	-	19/12/2022	Water	X		X													
2	MW02	-	19/12/2022	Water	X		X													
3	MW03	-	19/12/2022	Water		X	X	X												
4	MW04	-	20/12/2022	Water		X	X	X												
5	MW05	-	20/12/2022	Water	X		X													
6	MW06	-	20/12/2022	Water		X	X	X												
7	MW07	-	19/12/2022	Water	X		X													
8	MW08	-	19/12/2022	Water	X		X													
9	EW1	-	20/12/2022	Water	X		X													
10	EW2	-	20/12/2022	Water	X		X													
11	EW3	-	20/12/2022	Water	X		X													
12	DUP1	-	20/12/2022	Water	X															
~~13~~	TRIP1	-	20/12/2022	Water	X															Please forward to ALS
13	TRIP SPIKE	-	20/12/2022	Water					X											
14	TRIP BLANK	-	20/12/2022	Water					X											
				Sample Count	10	3	11	3	2											

☐ *Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis*

Relinquished by (Company): Reditus		Received by (Company): GLS	
Print Name:	Kyle Sier	Print Name: DEAN	
Date & Time:	20/12/22 5:00pm	Date & Time: 21/12/22	16:00
Signature:	K.Sier	Signature:	

Lab Use Only

Job number: 313723	Cooling: Ice / Ice pack / None
Temperature:	Security seal: Intact / Broken / None
TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

Envirolab Services Pty Ltd
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CERTIFICATE OF ANALYSIS 313723

Client Details

Client	Reditus Consulting
Attention	Jack Palma, Kyle Sier, Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038**
Number of Samples	14 Water
Date samples received	21/12/2022
Date completed instructions received	21/12/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

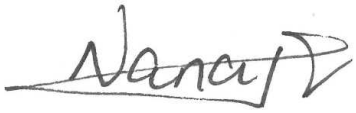
Date results requested by	09/01/2023
Date of Issue	09/01/2023

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Results Approved By
Kyle Gavrily, Senior Chemist
Loren Bardwell, Development Chemist
Nick Sarlamis, Assistant Operation Manager
Phalak Inthakesone, Organics Development Manager, Sydney

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in water						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1

VOCs in water						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Bromoform	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	104	107	112	104	105
Surrogate toluene-d8	%	103	105	103	102	103
Surrogate 4-BFB	%	101	99	101	101	98

VOCs in water						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1

VOCs in water						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Bromoform	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	106	98	109	106	106
Surrogate toluene-d8	%	103	100	105	104	102
Surrogate 4-BFB	%	100	98	102	97	97

VOCs in water		
Our Reference		313723-11
Your Reference	UNITS	EW3
Date Sampled		20/12/2022
Type of sample		Water
Date extracted	-	22/12/2022
Date analysed	-	22/12/2022
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	<1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water		
Our Reference		313723-11
Your Reference	UNITS	EW3
Date Sampled		20/12/2022
Type of sample		Water
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	112
Surrogate toluene-d8	%	104
Surrogate 4-BFB	%	102

PFAS in Waters Extended				
Our Reference	UNITS	313723-3	313723-4	313723-6
Your Reference		MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date prepared	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.01	<0.01	<0.01
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	0.06	<0.02	<0.02
Perfluoropentanoic acid	µg/L	0.23	<0.02	<0.02
Perfluorohexanoic acid	µg/L	0.20	<0.01	<0.01
Perfluoroheptanoic acid	µg/L	0.06	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	0.01	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02
Surrogate $^{13}C_8$ *PFOS*	%	99	98	104
Surrogate $^{13}C_2$ *PFOA*	%	101	98	101
Extracted ISTD $^{13}C_3$ *PFBS*	%	92	92	90
Extracted ISTD $^{18}O_2$ *PFHxS*	%	99	95	95
Extracted ISTD $^{13}C_4$ *PFOS*	%	95	93	91
Extracted ISTD $^{13}C_4$ *PFBA*	%	61	78	80

PFAS in Waters Extended				
Our Reference		313723-3	313723-4	313723-6
Your Reference	UNITS	MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Extracted ISTD $^{13}C_3$ *PFPeA*	%	93	87	86
Extracted ISTD $^{13}C_2$ *PFHxA*	%	98	97	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%	97	95	94
Extracted ISTD $^{13}C_4$ *PFOA*	%	98	94	96
Extracted ISTD $^{13}C_5$ *PFNA*	%	99	96	94
Extracted ISTD $^{13}C_2$ *PFDA*	%	98	98	96
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	95	95	94
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	92	93	91
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	57	67	72
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	82	62	61
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	84	65	69
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	92	77	75
Extracted ISTD $^{13}C_8$ *FOSA*	%	96	95	93
Extracted ISTD d_3 *N MeFOSA*	%	100	101	100
Extracted ISTD d_5 *N EtFOSA*	%	99	100	100
Extracted ISTD d_7 *N MeFOSE*	%	104	105	103
Extracted ISTD d_9 *N EtFOSE*	%	95	98	96
Extracted ISTD d_3 *N MeFOSAA*	%	100	86	83
Extracted ISTD d_5 *N EtFOSAA*	%	87	72	70
Total Positive PFHxS & PFOS	µg/L	<0.01	<0.01	<0.01
Total Positive PFOA & PFOS	µg/L	0.01	<0.01	<0.01
Total Positive PFAS	µg/L	0.56	<0.01	<0.01

vTRH(C6-C10)/BTEXN in Water						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	104	107	112	104	105
Surrogate toluene-d8	%	103	105	103	102	103
Surrogate 4-BFB	%	101	99	101	101	98

vTRH(C6-C10)/BTEXN in Water						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	106	98	109	106	106
Surrogate toluene-d8	%	103	100	105	104	102
Surrogate 4-BFB	%	100	98	102	97	97

vTRH(C6-C10)/BTEXN in Water					
Our Reference	UNITS	313723-11	313723-12	313723-13	313723-14
Your Reference		EW3	DUP1	Trip Spike	Trip Blank
Date Sampled		20/12/2022	20/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022
TRH C_6 - C_9	µg/L	<10	<10	[NA]	<10
TRH C_6 - C_{10}	µg/L	<10	<10	[NA]	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	[NA]	<10
Benzene	µg/L	<1	<1	117%	<1
Toluene	µg/L	<1	<1	118%	<1
Ethylbenzene	µg/L	<1	<1	120%	<1
m+p-xylene	µg/L	<2	<2	120%	<2
o-xylene	µg/L	<1	<1	119%	<1
Naphthalene	µg/L	<1	<1	[NA]	<1
Surrogate Dibromofluoromethane	%	112	102	106	105
Surrogate toluene-d8	%	104	103	100	104
Surrogate 4-BFB	%	102	99	97	101

svTRH (C10-C40) in Water						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	29/12/2022	29/12/2022	29/12/2022	29/12/2022	29/12/2022
TRH C_{10} - C_{14}	µg/L	<50	85	460	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	80	460	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	110	530	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	110	530	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	110	530	<50	<50
Surrogate o-Terphenyl	%	88	122	135	69	118

svTRH (C10-C40) in Water						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	29/12/2022	29/12/2022	29/12/2022	29/12/2022	29/12/2022
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	68	94	69	79	121

svTRH (C10-C40) in Water			
Our Reference	UNITS	313723-11	313723-12
Your Reference		EW3	DUP1
Date Sampled		20/12/2022	20/12/2022
Type of sample		Water	Water
Date extracted	-	22/12/2022	22/12/2022
Date analysed	-	29/12/2022	29/12/2022
TRH C_{10} - C_{14}	µg/L	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100
Total +ve TRH (C10-C36)	µg/L	<50	<50
TRH >C_{10} - C_{16}	µg/L	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100
Total +ve TRH (>C10-C40)	µg/L	<50	<50
Surrogate o-Terphenyl	%	87	111

PAHs in Water						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	µg/L	<1	<1	<1	<1	<1
Acenaphthylene	µg/L	<1	<1	<1	<1	<1
Acenaphthene	µg/L	<1	<1	<1	<1	<1
Fluorene	µg/L	<1	<1	<1	<1	<1
Phenanthrene	µg/L	<1	<1	<1	<1	<1
Anthracene	µg/L	<1	<1	<1	<1	<1
Fluoranthene	µg/L	<1	<1	<1	<1	<1
Pyrene	µg/L	<1	<1	<1	<1	<1
Benzo(a)anthracene	µg/L	<1	<1	<1	<1	<1
Chrysene	µg/L	<1	<1	<1	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2	<2	<2	<2
Benzo(a)pyrene	µg/L	<1	<1	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1	<1	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1	<1	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5	<5	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	74	75	81	87	71

PAHs in Water						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022	22/12/2022	22/12/2022
Naphthalene	µg/L	<1	<1	<1	<1	<1
Acenaphthylene	µg/L	<1	<1	<1	<1	<1
Acenaphthene	µg/L	<1	<1	<1	<1	<1
Fluorene	µg/L	<1	<1	<1	<1	<1
Phenanthrene	µg/L	<1	<1	<1	<1	<1
Anthracene	µg/L	<1	<1	<1	<1	<1
Fluoranthene	µg/L	<1	<1	<1	<1	<1
Pyrene	µg/L	<1	<1	<1	<1	<1
Benzo(a)anthracene	µg/L	<1	<1	<1	<1	<1
Chrysene	µg/L	<1	<1	<1	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2	<2	<2	<2
Benzo(a)pyrene	µg/L	<1	<1	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1	<1	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1	<1	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5	<5	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	70	79	81	75	80

PAHs in Water			
Our Reference	UNITS	313723-11	313723-12
Your Reference		EW3	DUP1
Date Sampled		20/12/2022	20/12/2022
Type of sample		Water	Water
Date extracted	-	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022
Naphthalene	µg/L	<1	<1
Acenaphthylene	µg/L	<1	<1
Acenaphthene	µg/L	<1	<1
Fluorene	µg/L	<1	<1
Phenanthrene	µg/L	<1	<1
Anthracene	µg/L	<1	<1
Fluoranthene	µg/L	<1	<1
Pyrene	µg/L	<1	<1
Benzo(a)anthracene	µg/L	<1	<1
Chrysene	µg/L	<1	<1
Benzo(b,j+k)fluoranthene	µg/L	<2	<2
Benzo(a)pyrene	µg/L	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	<1	<1
Dibenzo(a,h)anthracene	µg/L	<1	<1
Benzo(g,h,i)perylene	µg/L	<1	<1
Benzo(a)pyrene TEQ	µg/L	<5	<5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE
Surrogate p-Terphenyl-d14	%	86	71

Organochlorine Pesticides in Water				
Our Reference	UNITS	313723-3	313723-4	313723-6
Your Reference		MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
alpha-BHC	µg/L	<0.2	<0.2	<0.2
HCB	µg/L	<0.2	<0.2	<0.2
beta-BHC	µg/L	<0.2	<0.2	<0.2
gamma-BHC	µg/L	<0.2	<0.2	<0.2
Heptachlor	µg/L	<0.2	<0.2	<0.2
delta-BHC	µg/L	<0.2	<0.2	<0.2
Aldrin	µg/L	<0.2	<0.2	<0.2
Heptachlor Epoxide	µg/L	<0.2	<0.2	<0.2
gamma-Chlordane	µg/L	<0.2	<0.2	<0.2
alpha-Chlordane	µg/L	<0.2	<0.2	<0.2
Endosulfan I	µg/L	<0.2	<0.2	<0.2
pp-DDE	µg/L	<0.2	<0.2	<0.2
Dieldrin	µg/L	<0.2	<0.2	<0.2
Endrin	µg/L	<0.2	<0.2	<0.2
Endosulfan II	µg/L	<0.2	<0.2	<0.2
pp-DDD	µg/L	<0.2	<0.2	<0.2
Endrin Aldehyde	µg/L	<0.2	<0.2	<0.2
pp-DDT	µg/L	<0.2	<0.2	<0.2
Endosulfan Sulphate	µg/L	<0.2	<0.2	<0.2
Methoxychlor	µg/L	<0.2	<0.2	<0.2
Surrogate TCMX	%	89	96	80

OP Pesticides in Water				
Our Reference	UNITS	313723-3	313723-4	313723-6
Your Reference		MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Dichlorvos	µg/L	<0.2	<0.2	<0.2
Dimethoate	µg/L	<0.2	<0.2	<0.2
Diazinon	µg/L	<0.2	<0.2	<0.2
Chlorpyriphos-methyl	µg/L	<0.2	<0.2	<0.2
Ronnel	µg/L	<0.2	<0.2	<0.2
Fenitrothion	µg/L	<0.2	<0.2	<0.2
Malathion	µg/L	<0.2	<0.2	<0.2
Chlorpyriphos	µg/L	<0.2	<0.2	<0.2
Parathion	µg/L	<0.2	<0.2	<0.2
Bromophos ethyl	µg/L	<0.2	<0.2	<0.2
Ethion	µg/L	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	µg/L	<0.2	<0.2	<0.2
Surrogate TCMX	%	89	96	80

PCBs in Water				
Our Reference		313723-3	313723-4	313723-6
Your Reference	UNITS	MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Aroclor 1016	µg/L	<2	<2	<2
Aroclor 1221	µg/L	<2	<2	<2
Aroclor 1232	µg/L	<2	<2	<2
Aroclor 1242	µg/L	<2	<2	<2
Aroclor 1248	µg/L	<2	<2	<2
Aroclor 1254	µg/L	<2	<2	<2
Aroclor 1260	µg/L	<2	<2	<2
Surrogate TCMX	%	89	96	80

Total Phenolics in Water				
Our Reference		313723-3	313723-4	313723-6
Your Reference	UNITS	MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date extracted	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Total Phenolics (as Phenol)	mg/L	<0.05	<0.05	<0.05

HM in water - dissolved						
Our Reference		313723-1	313723-2	313723-3	313723-4	313723-5
Your Reference	UNITS	MW01	MW02	MW03	MW04	MW05
Date Sampled		19/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Arsenic-Dissolved	µg/L	1	<1	<1	3	<1
Cadmium-Dissolved	µg/L	0.2	0.5	0.4	1.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	4	5	2	1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	11	51	51	55	6
Zinc-Dissolved	µg/L	38	160	170	120	<1

HM in water - dissolved						
Our Reference		313723-6	313723-7	313723-8	313723-9	313723-10
Your Reference	UNITS	MW06	MW07	MW08	EW1	EW2
Date Sampled		20/12/2022	19/12/2022	19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Date analysed	-	28/12/2022	28/12/2022	28/12/2022	28/12/2022	28/12/2022
Arsenic-Dissolved	µg/L	2	1	<1	<1	1
Cadmium-Dissolved	µg/L	<0.1	0.6	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1	<1
Copper-Dissolved	µg/L	<1	2	2	<1	<1
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	5	33	7	11	13
Zinc-Dissolved	µg/L	12	89	58	26	43

HM in water - dissolved			
Our Reference		313723-11	313723-12
Your Reference	UNITS	EW3	DUP1
Date Sampled		20/12/2022	20/12/2022
Type of sample		Water	Water
Date prepared	-	28/12/2022	28/12/2022
Date analysed	-	28/12/2022	28/12/2022
Arsenic-Dissolved	µg/L	<1	2
Cadmium-Dissolved	µg/L	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1
Copper-Dissolved	µg/L	<1	<1
Lead-Dissolved	µg/L	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05
Nickel-Dissolved	µg/L	<1	7
Zinc-Dissolved	µg/L	<1	18

Miscellaneous Inorganics				
Our Reference	UNITS	313723-3	313723-4	313723-6
Your Reference		MW03	MW04	MW06
Date Sampled		19/12/2022	20/12/2022	20/12/2022
Type of sample		Water	Water	Water
Date prepared	-	22/12/2022	22/12/2022	22/12/2022
Date analysed	-	22/12/2022	22/12/2022	22/12/2022
Total Cyanide	mg/L	<0.004	<0.004	<0.004

Method ID	Methodology Summary
Inorg-014	Cyanide - free, total, weak acid dissociable by segmented flow analyser (in line dialysis with colourimetric finish). Solids/Filters and sorbents are extracted in a caustic media prior to analysis. Impingers are pH adjusted as required prior to analysis. Cyanides amenable to Chlorination - samples are analysed untreated and treated with hypochlorite to assess the potential for chlorination of cyanide forms. Based on APHA latest edition, 4500-CN_G,H.
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-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
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-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
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. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly 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.

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			22/12/2022	1	22/12/2022	29/12/2022		22/12/2022	[NT]
Date analysed	-			22/12/2022	1	22/12/2022	03/01/2023		22/12/2022	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	118	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	1	<1	<1	0	119	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	119	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	115	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	120	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	119	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	1	<1	<1	0	105	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	1	<1	<1	0	119	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	104	1	104	104	0	101	[NT]
Surrogate toluene-d8	%		Org-023	105	1	103	101	2	101	[NT]
Surrogate 4-BFB	%		Org-023	104	1	101	104	3	100	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	22/12/2022	29/12/2022		[NT]	[NT]
Date analysed	-			[NT]	11	22/12/2022	03/01/2023		[NT]	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
2,2-dichloropropane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1-dichloropropene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Bromodichloromethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2-dibromoethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	11	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	11	112	103	8	[NT]	[NT]
Surrogate toluene-d8	%		Org-023	[NT]	11	104	99	5	[NT]	[NT]
Surrogate 4-BFB	%		Org-023	[NT]	11	102	99	3	[NT]	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	103	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	109	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	99	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	104	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	105	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	108	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	99	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	98	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	67	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			22/12/2022	1	22/12/2022	29/12/2022		22/12/2022	[NT]
Date analysed	-			22/12/2022	1	22/12/2022	03/01/2023		22/12/2022	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	1	<10	<10	0	120	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	1	<10	<10	0	120	[NT]
Benzene	µg/L	1	Org-023	<1	1	<1	<1	0	114	[NT]
Toluene	µg/L	1	Org-023	<1	1	<1	<1	0	117	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	1	<1	<1	0	119	[NT]
m+p-xylene	µg/L	2	Org-023	<2	1	<2	<2	0	120	[NT]
o-xylene	µg/L	1	Org-023	<1	1	<1	<1	0	118	[NT]
Naphthalene	µg/L	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	104	1	104	104	0	101	[NT]
Surrogate toluene-d8	%		Org-023	105	1	103	101	2	101	[NT]
Surrogate 4-BFB	%		Org-023	104	1	101	104	3	100	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	22/12/2022	29/12/2022		[NT]	[NT]
Date analysed	-			[NT]	11	22/12/2022	03/01/2023		[NT]	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	[NT]	11	<10	<10	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	11	<2	<2	0	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Naphthalene	µg/L	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	11	112	103	8	[NT]	[NT]
Surrogate toluene-d8	%		Org-023	[NT]	11	104	99	5	[NT]	[NT]
Surrogate 4-BFB	%		Org-023	[NT]	11	102	99	3	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	313723-11
Date extracted	-			22/12/2022	1	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			28/12/2022	1	29/12/2022	29/12/2022		28/12/2022	29/12/2022
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	1	<50	<50	0	124	94
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	1	<100	<100	0	120	83
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	1	<100	<100	0	100	70
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	1	<50	<50	0	124	94
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	1	<100	<100	0	120	83
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	1	<100	<100	0	100	70
Surrogate o-Terphenyl	%		Org-020	82	1	88	83	6	122	87

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	3	22/12/2022	22/12/2022		[NT]	[NT]
Date analysed	-			[NT]	3	29/12/2022	29/12/2022		[NT]	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	[NT]	3	460	380	19	[NT]	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	[NT]	3	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	[NT]	3	<100	<100	0	[NT]	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	[NT]	3	530	440	19	[NT]	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	[NT]	3	<100	<100	0	[NT]	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	[NT]	3	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	3	135	118	13	[NT]	[NT]

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	313723-4
Date extracted	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Naphthalene	µg/L	1	Org-022/025	<1	3	<1	<1	0	74	80
Acenaphthylene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022/025	<1	3	<1	<1	0	77	79
Fluorene	µg/L	1	Org-022/025	<1	3	<1	<1	0	80	80
Phenanthrene	µg/L	1	Org-022/025	<1	3	<1	<1	0	90	90
Anthracene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022/025	<1	3	<1	<1	0	90	88
Pyrene	µg/L	1	Org-022/025	<1	3	<1	<1	0	95	91
Benzo(a)anthracene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Chrysene	µg/L	1	Org-022/025	<1	3	<1	<1	0	93	93
Benzo(b,j+k)fluoranthene	µg/L	2	Org-022/025	<2	3	<2	<2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022/025	<1	3	<1	<1	0	126	116
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022/025	<1	3	<1	<1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	72	3	81	72	12	107	78

QUALITY CONTROL: PAHs in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date extracted	-			[NT]	6	22/12/2022	22/12/2022		22/12/2022	[NT]
Date analysed	-			[NT]	6	22/12/2022	22/12/2022		22/12/2022	[NT]
Naphthalene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	69	[NT]
Acenaphthylene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Acenaphthene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	79	[NT]
Fluorene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	61	[NT]
Phenanthrene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	80	[NT]
Anthracene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Fluoranthene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	71	[NT]
Pyrene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	75	[NT]
Benzo(a)anthracene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Chrysene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	81	[NT]
Benzo(b,j+k)fluoranthene	µg/L	2	Org-022/025	[NT]	6	<2	<2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	76	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	1	Org-022/025	[NT]	6	<1	<1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	6	70	69	1	88	[NT]

QUALITY CONTROL: Organochlorine Pesticides in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	313723-4
Date extracted	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
alpha-BHC	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	90	88
HCB	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
beta-BHC	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	99	92
gamma-BHC	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Heptachlor	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	87	81
delta-BHC	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Aldrin	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	109	103
Heptachlor Epoxide	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	108	102
gamma-Chlordane	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
alpha-Chlordane	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Endosulfan I	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
pp-DDE	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	105	98
Dieldrin	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	112	104
Endrin	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	98	96
Endosulfan II	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
pp-DDD	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	102	94
Endrin Aldehyde	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
pp-DDT	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	116	106
Methoxychlor	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	117	3	89	78	13	113	85

QUALITY CONTROL: Organochlorine Pesticides in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
Date analysed	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
alpha-BHC	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
HCB	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
beta-BHC	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
gamma-BHC	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Heptachlor	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
delta-BHC	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Aldrin	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Heptachlor Epoxide	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
gamma-Chlordane	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
alpha-Chlordane	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Endosulfan I	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
pp-DDE	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Dieldrin	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Endrin	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Endosulfan II	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
pp-DDD	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Endrin Aldehyde	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
pp-DDT	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Methoxychlor	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	6	80	82	2	[NT]	[NT]

QUALITY CONTROL: OP Pesticides in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	313723-4
Date extracted	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Dichlorvos	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	112	111
Dimethoate	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Diazinon	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Ronnel	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	85	79
Fenitrothion	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	95	85
Malathion	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	110	101
Chlorpyriphos	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	108	100
Parathion	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	117	80
Bromophos ethyl	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Ethion	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	113	94
Azinphos-methyl (Guthion)	µg/L	0.2	Org-022/025	<0.2	3	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	117	3	89	78	13	113	85

QUALITY CONTROL: OP Pesticides in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
Date analysed	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
Dichlorvos	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Dimethoate	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Diazinon	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Chlorpyriphos-methyl	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Ronnel	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Fenitrothion	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Malathion	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Chlorpyriphos	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Parathion	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Bromophos ethyl	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Ethion	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Azinphos-methyl (Guthion)	µg/L	0.2	Org-022/025	[NT]	6	<0.2	<0.2	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	6	80	82	2	[NT]	[NT]

QUALITY CONTROL: PCBs in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	313723-4
Date extracted	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Date analysed	-			22/12/2022	3	22/12/2022	22/12/2022		22/12/2022	22/12/2022
Aroclor 1016	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-021	<2	3	<2	<2	0	112	120
Aroclor 1260	µg/L	2	Org-021	<2	3	<2	<2	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	117	3	89	78	13	113	85

QUALITY CONTROL: PCBs in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
Date analysed	-			[NT]	6	22/12/2022	22/12/2022		[NT]	[NT]
Aroclor 1016	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1221	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1232	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1242	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1248	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1254	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Aroclor 1260	µg/L	2	Org-021	[NT]	6	<2	<2	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	6	80	82	2	[NT]	[NT]

QUALITY CONTROL: Total Phenolics in Water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-031	<0.05	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	313723-2
Date prepared	-			28/12/2022	1	28/12/2022	28/12/2022		28/12/2022	28/12/2022
Date analysed	-			28/12/2022	1	28/12/2022	28/12/2022		28/12/2022	28/12/2022
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	1	1	0	99	107
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	0.2	0.2	0	100	104
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	100	104
Copper-Dissolved	µg/L	1	Metals-022	<1	1	4	4	0	99	97
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	98	94
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	87	74
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	11	11	0	99	101
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	38	33	14	106	#

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	11	28/12/2022	28/12/2022		[NT]	[NT]
Date analysed	-			[NT]	11	28/12/2022	28/12/2022		[NT]	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]
Copper-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]
Lead-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	[NT]	11	<0.05	[NT]		[NT]	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	[NT]	11	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Date analysed	-			22/12/2022	[NT]	[NT]	[NT]	[NT]	22/12/2022	[NT]
Total Cyanide	mg/L	0.004	Inorg-014	<0.004	[NT]	[NT]	[NT]	[NT]	98	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

Report Comments

8 HM in water - dissolved - # Percent recovery is not applicable due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2246531**

Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: deanstafford@reditus.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: ----	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 22038	Page	: 1 of 2
Order number	: 22038	Quote number	: ES2019REDITUS0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	:		
Sampler	:		

Dates

Date Samples Received	: 22-Dec-2022 14:40	Issue Date	: 22-Dec-2022
Client Requested Due Date	: 06-Jan-2023	Scheduled Reporting Date	: **06-Jan-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 5.3°C - Ice Bricks present
Receipt Detail	:	No. of samples received / analysed	: 1 / 1

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-26 TRH/BTEXN/PAH/8 Metals
ES2246531-001	20-Dec-2022 00:00	TRIP1	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS		
- A4 - AU Tax Invoice (INV)	Email	accounts@reditusconsulting.com
Dean Stafford		
- *AU Certificate of Analysis - NATA (COA)	Email	deanstafford@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	deanstafford@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	deanstafford@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	deanstafford@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	deanstafford@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	deanstafford@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	deanstafford@reditus.com.au
Esdat Deliverables		
- EDI Format - ESDAT (ESDAT)	Email	reditusconsulting@esdat.com.au
JACK PALMA		
- *AU Certificate of Analysis - NATA (COA)	Email	jackpalma@reditus.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	jackpalma@reditus.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	jackpalma@reditus.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	jackpalma@reditus.com.au
- Chain of Custody (CoC) (COC)	Email	jackpalma@reditus.com.au
- EDI Format - ENMRG (ENMRG)	Email	jackpalma@reditus.com.au
- EDI Format - ESDAT (ESDAT)	Email	jackpalma@reditus.com.au
KYLE SIER		
- *AU Certificate of Analysis - NATA (COA)	Email	kylesier@reditusconsulting.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	kylesier@reditusconsulting.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	kylesier@reditusconsulting.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	kylesier@reditusconsulting.com
- Chain of Custody (CoC) (COC)	Email	kylesier@reditusconsulting.com
- EDI Format - ENMRG (ENMRG)	Email	kylesier@reditusconsulting.com
- EDI Format - ESDAT (ESDAT)	Email	kylesier@reditusconsulting.com

CHAIN OF CUSTODY FORM - Client

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Darwin Office - Envirolab Services
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08 8967 1201 | darwin@envirolab.com.au

Client: Reditus Consulting
Contact Person: Kyle Sier
Project Mgr: Dean Stafford
Sampler: Kyle Sier
Address: Unit 1A, Level 1, 29-33 Waratah Street Kirrawee NSW
Phone: 02 9521 6567 Mob: 0478117515
Email Invoice To: accounts@reditusconsulting.com
Email Results To: kylesier@reditus.com.au, deanstafford@reditus.com.au, jackpalma@reditus.com.au

Client Project Name/Number/Site etc (ie report title): 22038
PO No.: 22038
Envirolab Quote No. :
Date results required: standard
Or choose: standard / same day / 1 day / 2 day / 3 day
Note: inform lab in advance if urgent turnaround is required - surcharges apply
Additional report format: esdat
Lab Comments:

Sample information					Tests Required																Comments
Envirolab Sample ID	Client Sample ID or information	Depth	Date sampled	Type of sample	Combo 3	Combo 10	VOCs	PFAS (standard suite)	Analyse (TRH/BTEX)												Provide as much information about the sample as you can
1	MW01	-	19/12/2022	Water	x		x														
2	MW02	-	19/12/2022	Water	x		x														
3	MW03	-	19/12/2022	Water		x	x	x													
4	MW04	-	20/12/2022	Water		x	x	x													
5	MW05	-	20/12/2022	Water	x		x														
6	MW06	-	20/12/2022	Water		x	x	x													
7	MW07	-	19/12/2022	Water	x		x														
8	MW08	-	19/12/2022	Water	x		x														
9	EW1	-	20/12/2022	Water	x		x														
10	EW2	-	20/12/2022	Water	x		x														
11	EW3	-	20/12/2022	Water	x		x														
12	DUP1	-	20/12/2022	Water	x																
(13)	TRIP1	-	20/12/2022	Water	x																Please forward to ALS
13	TRIP SPIKE	-	20/12/2022	Water					x												
14	TRIP BLANK	-	20/12/2022	Water					x												
				Sample Count	10	3	11	3	2												

Environmental Division
Sydney
Work Order Reference
ES2246531

Telephone : + 61-2-8784 8555

Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company): Reditus	ELS Sydney	Received by (Company): ELS	
Print Name: Kyle Sier	Chasmen	Print Name: D'Arcy	
Date & Time: 20/12/22 5:00pm	22/12/22 1200	Date & Time: 21/12/22	16:00
Signature: K.Sier		Signature:	

Lab Use Only

Job number: 313723	Cooling: Ice / Ice pack / None
Temperature:	Security seal: Intact / Broken / None
TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

Ref-J 22/12/22 1440

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2246531**	Page	: 1 of 4
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 22-Dec-2022
Site	:	Issue Date	: 05-Jan-2023
Sampler	: ----	No. of samples received	: 1
Order number	: 22038	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	18	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	19	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	18	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	19	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / ***Container*** / *Client Sample ID(s)*	***Sample Date***	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	***Date analysed***	*Due for analysis*	*Evaluation*
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
TRIP1	**20-Dec-2022**	**----**	----	----	**03-Jan-2023**	18-Jun-2023	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
TRIP1	**20-Dec-2022**	**----**	----	----	**04-Jan-2023**	17-Jan-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
TRIP1	**20-Dec-2022**	**24-Dec-2022**	27-Dec-2022	✓	**04-Jan-2023**	02-Feb-2023	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
TRIP1	**20-Dec-2022**	**24-Dec-2022**	27-Dec-2022	✓	**04-Jan-2023**	02-Feb-2023	✓
Clear glass VOC vial - HCl (EP080)							
TRIP1	**20-Dec-2022**	**03-Jan-2023**	03-Jan-2023	✓	**03-Jan-2023**	03-Jan-2023	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
TRIP1	**20-Dec-2022**	**24-Dec-2022**	27-Dec-2022	✓	**04-Jan-2023**	02-Feb-2023	✓
Clear glass VOC vial - HCl (EP080)							
TRIP1	**20-Dec-2022**	**03-Jan-2023**	03-Jan-2023	✓	**03-Jan-2023**	03-Jan-2023	✓
EP080: BTEXN							
Clear glass VOC vial - HCl (EP080)							
TRIP1	**20-Dec-2022**	**03-Jan-2023**	03-Jan-2023	✓	**03-Jan-2023**	03-Jan-2023	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	18	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	18	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	19	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2246531**	Page	: 1 of 6
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 22-Dec-2022
Order number	: 22038	Date Analysis Commenced	: 24-Dec-2022
C-O-C number	: ----	Issue Date	: 05-Jan-2023
Sampler	: ----		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 4798123)									
ES2246388-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.016	0.017	0.0	0% - 50%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES2246387-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 4798127)									
ES2246533-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2246565-005	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4796132)									
ES2246154-006	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2246417-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 4796132)									
ES2246154-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2246417-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 4796132)									
ES2246154-006	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2246417-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4798123)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	92.5	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	91.5	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	89.3	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.7	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	91.8	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	90.7	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	87.0	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 4798127)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	91.6	83.0	105
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4791672)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	64.8	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	70.2	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	70.2	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	69.7	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	72.7	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	76.1	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	79.9	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	81.0	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	72.3	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	72.7	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	72.7	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	80.7	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	71.9	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	77.1	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	78.6	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	62.0	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4791670)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	85.0	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	73.2	63.3	107
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	83.8	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4796132)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	93.8	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791670)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4791670) - continued								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	72.2	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	77.0	57.8	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	81.7	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4796132)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	95.6	75.0	127
EP080: BTEXN (QCLot: 4796132)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	91.5	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	91.2	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	95.5	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	94.4	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	97.1	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	94.5	70.0	120

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 4798123)							
ES2246317-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	97.7	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	98.5	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	97.0	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	100	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	97.8	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	96.9	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	99.7	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 4798127)							
ES2246531-001	TRIP1	EG035F: Mercury	7439-97-6	0.01 mg/L	73.2	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4796132)							
ES2246154-006	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	102	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4796132)							
ES2246154-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	100	70.0	130
EP080: BTEXN (QCLot: 4796132)							
ES2246154-006	Anonymous	EP080: Benzene	71-43-2	25 µg/L	98.6	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 4796132) - continued							
ES2246154-006	Anonymous	EP080: Toluene	108-88-3	25 µg/L	94.1	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	102	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	98.8	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	102	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	96.7	70.0	130

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2246531**	Page	: 1 of 5
Client	: **REDITUS CONSULTING PTY LTD.**	Laboratory	: Environmental Division Sydney
Contact	: Dean Stafford	Contact	: Customer Services ES
Address	: 1A/29-33 Waratah Street KIRRAWEE	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 22038	Date Samples Received	: 22-Dec-2022 14:40
Order number	: 22038	Date Analysis Commenced	: 24-Dec-2022
C-O-C number	: ----	Issue Date	: 05-Jan-2023 12:36
Sampler	: ----		
Site	:		
Quote number	: EN/222		
No. of samples received	: 1		
No. of samples analysed	: 1		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	TRIP1	----	----	----	----
				Sampling date / time	20-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2246531-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.005**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	µg/L		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	TRIP1	----	----	----	----
				Sampling date / time	20-Dec-2022 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2246531-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	----	----	----	----
Toluene	108-88-3	2	µg/L		<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	----	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	----	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**24.0**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**44.4**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**53.0**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**51.0**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**60.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**66.3**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**113**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**106**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**108**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

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	Reditus Consulting
Attention	Dean Stafford

Sample Login Details

Your reference	22038-1 King St, Concord West
Envirolab Reference	316254
Date Sample Received	10/02/2023
Date Instructions Received	10/02/2023
Date Results Expected to be Reported	17/02/2023

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2xCansiter
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	n/a
Cooling Method	Not applicable
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:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	TO15 in Canisters/Bags	TO15 in Canisters µg/m3	TPH Air/ Air Phase Hydrocarbon	Permanent Gas analysis
MW01	✓	✓	✓	✓
MW08	✓	✓	✓	✓

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.

CHAIN OF CUSTODY - CANISTERS / BAGS / TD TUBES

[Copyright and Confidential]

See reverse side for TERMS AND CONDITIONS FOR PROVISION OF SAMPLING EQUIPMENT

ENVIROLAB GROUP

National phone number 1300 424 344

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07 3266 9532 | brisbane@envirolab.com.au

Darwin Office - Envirolab Services
Unit 20/119 Reichardt Road, Winnellie, NT 0820

Client: REDITUS CONSULTANT.	Client Project Name / Number / Site etc. (i.e. report title): 22033-1 KING STREET, CONCORD WEST
Contact Person: D. STAFFORD	
Project Mgr: D. STAFFORD	PO No.:
Sampler: D. STAFFORD	Envirolab Quote No. :
Address: UNIT 1A, 29-33 WARATAH STREET KIRRAWEE NSW 2232	Date results required: 17/2/23
	Or choose: (standard) / same day / 1 day / 2 day / 3 day
	Note: inform lab in advance if urgent turnaround is required - surcharges apply
Phone: Mob: 0434 657 155	Additional report format: esdat / equis /
Email: deanstafford@reditus.com.au.	Lab Comments:

Sample Information												Tests Required								Comments
Envirolab Sample ID	Client Sample ID (Field Location)	Canister / TD Tube #	Soil Gas Train / Mass Flow Controller #	Leak Test Passed (Y/N)	PID Reading (ppmv)	Date of Collection	Collection Time		Canister Vacuum (Hg")		Flow Rate (Bags/TD Tubes only)	TO-15 (Cans/Bags) / TO-17 (Tubes)	TPH	5 Sulphides (Cans/Bags only)	Ozone Precursors	General Gases* (Cans/Bags only)	RGA Full List (Cans/Bags only)			
							Time On	Time Off	Initial	Final										
1	MW01	10644		Y	0.1	9/2/23	1.35	1.36	-30	-10		X	X			X				
2	MW08	10664		Y	0.1	9/2/23	1.56	1.57	-30	-10		X	X			X				
		10639																		CANISTER LEAKED DURING TRANSPORT.

* General Gases - Please tick one:

- [x] 1) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Nitrogen
- [ ] 2) Methane, Oxygen, Carbon dioxide, Carbon monoxide, Helium, Hydrogen
- [ ] 3) Specify analytes (NB: If both Nitrogen and Helium/Hydrogen are require, please contact the laboratory

Relinquished by (Company): REDITUS	Received by (Company): ELS	*Lab Use Only:*
Print Name: DEAN STAFFORD	Print Name: DEFORD	Job Number: 316254
Date & Time: 10/2/23	Date & Time: 10/02/23 15:00	Security seal: (Intact) / Broken / None
Signature:	Signature:	TAT Req - SAME day / 1 / 2 / 3 / 4 / (STD)

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CERTIFICATE OF ANALYSIS 316254

Client Details

Client	Reditus Consulting
Attention	Dean Stafford
Address	Shop 1, 29-33 Waratah St, KIRRAWEE, NSW, 2232

Sample Details

Your Reference	**22038-1 King St, Concord West**
Number of Samples	2xCansiter
Date samples received	10/02/2023
Date completed instructions received	10/02/2023

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

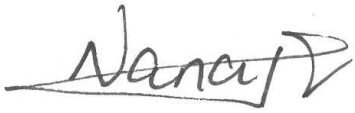
Date results requested by	17/02/2023
Date of Issue	17/02/2023

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Results Approved By
Amanda Chui, Air Toxics Team Leader

Authorised By



Nancy Zhang, Laboratory Manager

TO15 in Canisters/Bags			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Vacuum before Shipment	Hg"	-30	-30
Vacuum before Analysis	Hg"	-9	-11
Date prepared	-	13/02/2023	13/02/2023
Date analysed	-	13/02/2023	13/02/2023
Propylene	ppbv	46	74
Dichlorodifluoromethane	ppbv	<0.5	<0.5
Chloromethane	ppbv	8.4	6.7
1,2-Dichlorotetrafluoroethane	ppbv	<0.5	<0.5
Vinyl chloride	ppbv	0.9	0.6
1,3-Butadiene	ppbv	<0.5	<0.5
Bromomethane	ppbv	<0.5	<0.5
Chloroethane	ppbv	<0.5	<0.5
Ethanol	ppbv	30	6
Acrolein	ppbv	<5	<5
Trichlorofluoromethane (Freon 11)	ppbv	<0.5	<0.5
Acetone	ppbv	8	20
Isopropyl Alcohol	ppbv	56	76
1,1-Dichloroethene	ppbv	<0.5	<0.5
1,1,2-Trichlorotrifluoroethane	ppbv	<0.5	<0.5
Methylene chloride (Dichloromethane)	ppbv	<5	<5
Carbon Disulfide	ppbv	40	50
trans-1,2-dichloroethene	ppbv	<0.5	<0.5
MTBE	ppbv	<0.5	<0.5
1,1- Dichloroethane	ppbv	<0.5	<0.5
Vinyl Acetate	ppbv	<0.5	<0.5
MEK	ppbv	<5	<5
Hexane	ppbv	42	2
cis-1,2-Dichloroethene	ppbv	<0.5	<0.5
Ethyl Acetate	ppbv	<0.5	<0.5
Chloroform	ppbv	2	0.6
Tetrahydrofuran	ppbv	<0.5	<0.5
1,1,1-Trichloroethane	ppbv	<0.5	<0.5
1,2-Dichloroethane	ppbv	<0.5	<0.5
Benzene	ppbv	19	2
Carbon tetrachloride	ppbv	<0.5	<0.5

TO15 in Canisters/Bags			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Cyclohexane	ppbv	47	23
Heptane	ppbv	19	0.9
Trichloroethene	ppbv	<0.5	<0.5
1,2-Dichloropropane	ppbv	<0.5	<0.5
1,4-Dioxane	ppbv	<0.5	<0.5
Bromodichloromethane	ppbv	<0.5	<0.5
Methyl Methacrylate	ppbv	<0.5	<0.5
MIBK	ppbv	<5	<5
cis-1,3-Dichloropropene	ppbv	<0.5	<0.5
trans-1,3-Dichloropropene	ppbv	<0.5	<0.5
Toluene	ppbv	550	12
1,1,2-Trichloroethane	ppbv	<0.5	<0.5
Methyl Butyl Ketone	ppbv	<0.5	<0.5
Dibromochloromethane	ppbv	<0.5	<0.5
Tetrachloroethene	ppbv	<0.5	<0.5
1,2-Dibromoethane	ppbv	<0.5	<0.5
Chlorobenzene	ppbv	<0.5	<0.5
Ethylbenzene	ppbv	110	40
m-& p-Xylene	ppbv	380	30
Styrene	ppbv	2	29
o-Xylene	ppbv	140	15
Bromoform	ppbv	<0.5	<0.5
1,1,2,2-Tetrachloroethane	ppbv	<0.5	<0.5
4-ethyl toluene	ppbv	46	4
1,3,5-Trimethylbenzene	ppbv	44	3
1,2,4-Trimethylbenzene	ppbv	140	8.5
1,3-Dichlorobenzene	ppbv	<0.5	<0.5
Benzyl chloride	ppbv	<0.5	<0.5
1,4-Dichlorobenzene	ppbv	<0.5	<0.5
1,2-Dichlorobenzene	ppbv	<0.5	<0.5
1,2,4-Trichlorobenzene	ppbv	<0.5	<0.5
Naphthalene	ppbv	3	0.7
Hexachloro- 1,3-butadiene	ppbv	<0.5	<0.5
Surrogate-Bromochloromethane	% rec	116	119
Surrogate -1,4-Difluorobenzene	% rec	122	127
Surrogate-Chlorobenzene-D5	% rec	122	125

TO15 in Canisters µg/m3			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Vacuum before Shipment	Hg"	-30	-30
Vacuum before Analysis	Hg"	-9	-11
Date prepared	-	13/02/2023	13/02/2023
Date analysed	-	13/02/2023	13/02/2023
Propylene	µg/m³	79	130
Dichlorodifluoromethane	µg/m³	<2.5	<2.5
Chloromethane	µg/m³	17	14
1,2-Dichlorotetrafluoroethane	µg/m³	<2.5	<2.5
Vinyl chloride	µg/m³	2	1
1,3-Butadiene	µg/m³	<1.1	<1.1
Bromomethane	µg/m³	<1.9	<1.9
Chloroethane	µg/m³	<1.3	<1.3
Ethanol	µg/m³	60	10
Acrolein	µg/m³	<11	<11
Trichlorofluoromethane (Freon 11)	µg/m³	<2.8	<2.8
Acetone	µg/m³	20	50
Isopropyl Alcohol	µg/m³	140	190
1,1-Dichloroethene	µg/m³	<2	<2
1,1,2-Trichlorotrifluoroethane	µg/m³	<3.8	<3.8
Methylene chloride (Dichloromethane)	µg/m³	<17	<17
Carbon Disulfide	µg/m³	100	100
trans-1,2-dichloroethene	µg/m³	<2	<2
MTBE	µg/m³	<1.8	<1.8
1,1- Dichloroethane	µg/m³	<2	<2
Vinyl Acetate	µg/m³	<1.8	<1.8
MEK	µg/m³	<15	<15
Hexane	µg/m³	150	8
cis-1,2-Dichloroethene	µg/m³	<2	<2
Ethyl Acetate	µg/m³	<1.8	<1.8
Chloroform	µg/m³	8	3
Tetrahydrofuran	µg/m³	<1.5	<1.5
1,1,1-Trichloroethane	µg/m³	<2.7	<2.7
1,2-Dichloroethane	µg/m³	<2	<2
Benzene	µg/m³	59	6
Carbon tetrachloride	µg/m³	<3.1	<3.1

TO15 in Canisters µg/m3			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Cyclohexane	µg/m³	160	78
Heptane	µg/m³	80	4
Trichloroethene	µg/m³	<2.7	<2.7
1,2-Dichloropropane	µg/m³	<2.3	<2.3
1,4-Dioxane	µg/m³	<1.8	<1.8
Bromodichloromethane	µg/m³	<3.4	<3.4
Methyl Methacrylate	µg/m³	<2	2
MIBK	µg/m³	<20	<20
cis-1,3-Dichloropropene	µg/m³	<2.3	<2.3
trans-1,3-Dichloropropene	µg/m³	<2.3	<2.3
Toluene	µg/m³	2,100	45
1,1,2-Trichloroethane	µg/m³	<2.7	<2.7
Methyl Butyl Ketone	µg/m³	<2	<2
Dibromochloromethane	µg/m³	<1.6	<1.6
Tetrachloroethene	µg/m³	<3.4	<3.4
1,2-Dibromoethane	µg/m³	<3.8	<3.8
Chlorobenzene	µg/m³	<2.3	<2.3
Ethylbenzene	µg/m³	490	170
m-& p-Xylene	µg/m³	1,700	130
Styrene	µg/m³	9	130
o-Xylene	µg/m³	620	64
Bromoform	µg/m³	<5.2	<5.2
1,1,2,2-Tetrachloroethane	µg/m³	<3.4	<3.4
4-ethyl toluene	µg/m³	230	20
1,3,5-Trimethylbenzene	µg/m³	220	10
1,2,4-Trimethylbenzene	µg/m³	690	42
1,3-Dichlorobenzene	µg/m³	<3	<3
Benzyl chloride	µg/m³	<2.6	<2.6
1,4-Dichlorobenzene	µg/m³	<3	<3
1,2-Dichlorobenzene	µg/m³	<3	<3
1,2,4-Trichlorobenzene	µg/m³	<3.7	<3.7
Naphthalene	µg/m³	20	4
Hexachloro- 1,3-butadiene	µg/m³	<5.3	<5.3
Surrogate-Bromochloromethane	% rec	116	119
Surrogate -1,4-Difluorobenzene	% rec	122	127
Surrogate-Chlorobenzene-D5	% rec	122	125

TPH Air/ Air Phase Hydrocarbon			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Date prepared	-	13/02/2023	13/02/2023
Date analysed	-	13/02/2023	13/02/2023
TPH C_5 - C_8 Aliphatic	µg/m^3	5,200	1,000
TPH C_9 - C_{12} Aliphatic	µg/m^3	870	480
TPH C_9 - C_{10} Aromatic	µg/m^3	2,500	<100
TPH C_6 - C_{10} - BTEX (F1)	µg/m^3	3,800	510
TPH >C_{10} - C_{12} - Naphthalene (F2)	µg/m^3	1,900	410

Permanent Gas analysis			
Our Reference		316254-1	316254-2
Your Reference	UNITS	MW01	MW08
Date Sampled		09/02/2023	09/02/2023
Type of sample		Air	Air
Air Kit Security No.		10644	10664
Date prepared	-	13/02/2023	13/02/2023
Date analysed	-	13/02/2023	13/02/2023
Methane (CH_4)	%	<0.01	<0.01
Carbon Dioxide (CO_2)	%	8.4	13
Oxygen (O_2)	%	3.8	2.9
Nitrogen (N_2)	%	76	73
Carbon Monoxide (CO)	%	<0.01	<0.01

Method ID	Methodology Summary
AT-003	Gases determined by GC-FID/TCD using methods ASTM 1945, 1946 and USEPA 3C.
AT-005	Measurement of Air-Phase Petroleum Hydrocarbons and Ozone Precursors by GC-MS.
TO15	USEPA TO15 - Analysis of VOC's in air using USEPA TO15 and in house method AT-002. Note, longer term stability of some oxygenated compounds is questionable where significant humidity is present.
USEPA 18	Measurement of Gaseous Organic Compound Emissions by Gas Chromatography using USEPA m18.

QUALITY CONTROL: TO15 in Canisters/Bags						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Vacuum before Shipment	Hg"			[NT]	1	-30	-30	0	[NT]	[NT]
Vacuum before Analysis	Hg"			[NT]	1	-9	-9	0	[NT]	[NT]
Date prepared	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
Date analysed	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
Propylene	ppbv	0.5	TO15	<0.5	1	46	46	0	112	[NT]
Dichlorodifluoromethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Chloromethane	ppbv	0.5	TO15	<0.5	1	8.4	8.6	2	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Vinyl chloride	ppbv	0.5	TO15	<0.5	1	0.9	0.9	0	[NT]	[NT]
1,3-Butadiene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Bromomethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Chloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Ethanol	ppbv	5	TO15	<5	1	30	30	0	[NT]	[NT]
Acrolein	ppbv	5	TO15	<5	1	<5	<5	0	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Acetone	ppbv	5	TO15	<5	1	8	8	0	[NT]	[NT]
Isopropyl Alcohol	ppbv	5	TO15	<5	1	56	57	2	[NT]	[NT]
1,1-Dichloroethene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Methylene chloride (Dichloromethane)	ppbv	5	TO15	<5	1	<5	<5	0	[NT]	[NT]
Carbon Disulfide	ppbv	5	TO15	<5	1	40	40	0	[NT]	[NT]
trans-1,2-dichloroethene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
MTBE	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,1- Dichloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Vinyl Acetate	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
MEK	ppbv	5	TO15	<5	1	<5	<5	0	[NT]	[NT]
Hexane	ppbv	0.5	TO15	<0.5	1	42	43	2	98	[NT]
cis-1,2-Dichloroethene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Ethyl Acetate	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Chloroform	ppbv	0.5	TO15	<0.5	1	2	2	0	[NT]	[NT]
Tetrahydrofuran	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,1,1-Trichloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,2-Dichloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Benzene	ppbv	0.5	TO15	<0.5	1	19	19	0	101	[NT]
Carbon tetrachloride	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Cyclohexane	ppbv	0.5	TO15	<0.5	1	47	48	2	91	[NT]
Heptane	ppbv	0.5	TO15	<0.5	1	19	19	0	102	[NT]

QUALITY CONTROL: TO15 in Canisters/Bags						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Trichloroethene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,2-Dichloropropane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,4-Dioxane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Bromodichloromethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Methyl Methacrylate	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
MIBK	ppbv	5	TO15	<5	1	<5	<5	0	[NT]	[NT]
cis-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
trans-1,3-Dichloropropene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Toluene	ppbv	0.5	TO15	<0.5	1	550	570	4	107	[NT]
1,1,2-Trichloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Methyl Butyl Ketone	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Dibromochloromethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Tetrachloroethene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,2-Dibromoethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Chlorobenzene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	ppbv	0.5	TO15	<0.5	1	110	110	0	108	[NT]
m-& p-Xylene	ppbv	1	TO15	<1	1	380	380	0	108	[NT]
Styrene	ppbv	0.5	TO15	<0.5	1	2	2	0	107	[NT]
o-Xylene	ppbv	0.5	TO15	<0.5	1	140	140	0	107	[NT]
Bromoform	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
4-ethyl toluene	ppbv	0.5	TO15	<0.5	1	46	46	0	111	[NT]
1,3,5-Trimethylbenzene	ppbv	0.5	TO15	<0.5	1	44	45	2	107	[NT]
1,2,4-Trimethylbenzene	ppbv	0.5	TO15	<0.5	1	140	140	0	111	[NT]
1,3-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Benzyl chloride	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,4-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,2-Dichlorobenzene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
1,2,4-Trichlorobenzene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Naphthalene	ppbv	0.5	TO15	<0.5	1	3	3	0	[NT]	[NT]
Hexachloro- 1,3-butadiene	ppbv	0.5	TO15	<0.5	1	<0.5	<0.5	0	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	102	1	116	118	2	104	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	101	1	122	126	3	100	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	107	1	122	126	3	100	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Vacuum before Shipment	Hg"			[NT]	1	-30	-30	0	[NT]	[NT]
Vacuum before Analysis	Hg"			[NT]	1	-9	-9	0	[NT]	[NT]
Date prepared	-			13/02/2023	1	13/02/2023	13/02/2023		[NT]	[NT]
Date analysed	-			13/02/2023	1	13/02/2023	13/02/2023		[NT]	[NT]
Propylene	µg/m³	0.9	TO15	<0.9	1	79	80	1	[NT]	[NT]
Dichlorodifluoromethane	µg/m³	2.5	TO15	<2.5	1	<2.5	<2.5	0	[NT]	[NT]
Chloromethane	µg/m³	1.0	TO15	<1.0	1	17	18	6	[NT]	[NT]
1,2-Dichlorotetrafluoroethane	µg/m³	2.5	TO15	<2.5	1	<2.5	<2.5	0	[NT]	[NT]
Vinyl chloride	µg/m³	1.3	TO15	<1.3	1	2	2	0	[NT]	[NT]
1,3-Butadiene	µg/m³	1.1	TO15	<1.1	1	<1.1	<1.1	0	[NT]	[NT]
Bromomethane	µg/m³	1.9	TO15	<1.9	1	<1.9	<1.9	0	[NT]	[NT]
Chloroethane	µg/m³	1.3	TO15	<1.3	1	<1.3	<1.3	0	[NT]	[NT]
Ethanol	µg/m³	9	TO15	<9	1	60	60	0	[NT]	[NT]
Acrolein	µg/m³	11	TO15	<11	1	<11	<11	0	[NT]	[NT]
Trichlorofluoromethane (Freon 11)	µg/m³	2.8	TO15	<2.8	1	<2.8	<2.8	0	[NT]	[NT]
Acetone	µg/m³	11.9	TO15	<11.9	1	20	20	0	[NT]	[NT]
Isopropyl Alcohol	µg/m³	12	TO15	<12	1	140	140	0	[NT]	[NT]
1,1-Dichloroethene	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
1,1,2-Trichlorotrifluoroethane	µg/m³	3.8	TO15	<3.8	1	<3.8	<3.8	0	[NT]	[NT]
Methylene chloride (Dichloromethane)	µg/m³	17	USEPA 18	<17	1	<17	<17	0	[NT]	[NT]
Carbon Disulfide	µg/m³	16	TO15	<16	1	100	100	0	[NT]	[NT]
trans-1,2-dichloroethene	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
MTBE	µg/m³	1.8	TO15	<1.8	1	<1.8	<1.8	0	[NT]	[NT]
1,1- Dichloroethane	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
Vinyl Acetate	µg/m³	1.8	TO15	<1.8	1	<1.8	<1.8	0	[NT]	[NT]
MEK	µg/m³	15	TO15	<15	1	<15	<15	0	[NT]	[NT]
Hexane	µg/m³	1.8	TO15	<1.8	1	150	150	0	[NT]	[NT]
cis-1,2-Dichloroethene	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
Ethyl Acetate	µg/m³	1.8	TO15	<1.8	1	<1.8	<1.8	0	[NT]	[NT]
Chloroform	µg/m³	2.4	TO15	<2.4	1	8	8	0	[NT]	[NT]
Tetrahydrofuran	µg/m³	1.5	TO15	<1.5	1	<1.5	<1.5	0	[NT]	[NT]
1,1,1-Trichloroethane	µg/m³	2.7	TO15	<2.7	1	<2.7	<2.7	0	[NT]	[NT]
1,2-Dichloroethane	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
Benzene	µg/m³	1.6	TO15	<1.6	1	59	61	3	[NT]	[NT]
Carbon tetrachloride	µg/m³	3.1	TO15	<3.1	1	<3.1	<3.1	0	[NT]	[NT]
Cyclohexane	µg/m³	1.7	TO15	<1.7	1	160	170	6	[NT]	[NT]
Heptane	µg/m³	2.0	TO15	<2.0	1	80	79	1	[NT]	[NT]

QUALITY CONTROL: TO15 in Canisters µg/m3						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Trichloroethene	µg/m³	2.7	TO15	<2.7	1	<2.7	<2.7	0	[NT]	[NT]
1,2-Dichloropropane	µg/m³	2.3	TO15	<2.3	1	<2.3	<2.3	0	[NT]	[NT]
1,4-Dioxane	µg/m³	1.8	TO15	<1.8	1	<1.8	<1.8	0	[NT]	[NT]
Bromodichloromethane	µg/m³	3.4	TO15	<3.4	1	<3.4	<3.4	0	[NT]	[NT]
Methyl Methacrylate	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
MIBK	µg/m³	20	TO15	<20	1	<20	<20	0	[NT]	[NT]
cis-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	1	<2.3	<2.3	0	[NT]	[NT]
trans-1,3-Dichloropropene	µg/m³	2.3	TO15	<2.3	1	<2.3	<2.3	0	[NT]	[NT]
Toluene	µg/m³	1.9	TO15	<1.9	1	2100	2200	5	[NT]	[NT]
1,1,2-Trichloroethane	µg/m³	2.7	TO15	<2.7	1	<2.7	<2.7	0	[NT]	[NT]
Methyl Butyl Ketone	µg/m³	2.0	TO15	<2.0	1	<2	<2	0	[NT]	[NT]
Dibromochloromethane	µg/m³	1.6	TO15	<1.6	1	<1.6	<1.6	0	[NT]	[NT]
Tetrachloroethene	µg/m³	3.4	TO15	<3.4	1	<3.4	<3.4	0	[NT]	[NT]
1,2-Dibromoethane	µg/m³	3.8	TO15	<3.8	1	<3.8	<3.8	0	[NT]	[NT]
Chlorobenzene	µg/m³	2.3	TO15	<2.3	1	<2.3	<2.3	0	[NT]	[NT]
Ethylbenzene	µg/m³	2.2	TO15	<2.2	1	490	500	2	[NT]	[NT]
m-& p-Xylene	µg/m³	4.3	TO15	<4.3	1	1700	1700	0	[NT]	[NT]
Styrene	µg/m³	2.1	TO15	<2.1	1	9	10	11	[NT]	[NT]
o-Xylene	µg/m³	2.2	TO15	<2.2	1	620	630	2	[NT]	[NT]
Bromoform	µg/m³	5.2	TO15	<5.2	1	<5.2	<5.2	0	[NT]	[NT]
1,1,2,2-Tetrachloroethane	µg/m³	3.4	TO15	<3.4	1	<3.4	<3.4	0	[NT]	[NT]
4-ethyl toluene	µg/m³	2.5	TO15	<2.5	1	230	230	0	[NT]	[NT]
1,3,5-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	1	220	220	0	[NT]	[NT]
1,2,4-Trimethylbenzene	µg/m³	2.5	TO15	<2.5	1	690	690	0	[NT]	[NT]
1,3-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<3	<3	0	[NT]	[NT]
Benzyl chloride	µg/m³	2.6	TO15	<2.6	1	<2.6	<2.6	0	[NT]	[NT]
1,4-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<3	<3	0	[NT]	[NT]
1,2-Dichlorobenzene	µg/m³	3.0	TO15	<3.0	1	<3	<3	0	[NT]	[NT]
1,2,4-Trichlorobenzene	µg/m³	3.7	TO15	<3.7	1	<3.7	<3.7	0	[NT]	[NT]
Naphthalene	µg/m³	2.6	TO15	<2.6	1	20	20	0	[NT]	[NT]
Hexachloro- 1,3-butadiene	µg/m³	5.3	TO15	<5.3	1	<5.3	<5.3	0	[NT]	[NT]
Surrogate-Bromochloromethane	% rec		TO15	102	1	116	118	2	[NT]	[NT]
Surrogate -1,4-Difluorobenzene	% rec		TO15	101	1	122	126	3	[NT]	[NT]
Surrogate-Chlorobenzene-D5	% rec		TO15	107	1	122	126	3	[NT]	[NT]

QUALITY CONTROL: TPH Air/ Air Phase Hydrocarbon						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
Date analysed	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
TPH C_5 - C_8 Aliphatic	µg/m^3	200	AT-005	<200	1	5200	5300	2	101	[NT]
TPH C_9 - C_{12} Aliphatic	µg/m^3	50	AT-005	<50	1	870	920	6	[NT]	[NT]
TPH C_9 - C_{10} Aromatic	µg/m^3	100	AT-005	<100	1	2500	2600	4	102	[NT]
TPH C_6 - C_{10} - BTEX (F1)	µg/m^3	200	TO15	<200	1	3800	4000	5	101	[NT]
TPH >C_{10} - C_{12} - Naphthalene (F2)	µg/m^3	40	TO15	<40	1	1900	1900	0	100	[NT]

QUALITY CONTROL: Permanent Gas analysis						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
Date analysed	-			13/02/2023	1	13/02/2023	13/02/2023		13/02/2023	[NT]
Methane (CH_4)	%	0.01	AT-003	<0.01	1	<0.01	<0.01	0	100	[NT]
Carbon Dioxide (CO_2)	%	0.01	AT-003	<0.01	1	8.4	8.5	1	100	[NT]
Oxygen (O_2)	%	0.1	AT-003	<0.1	1	3.8	3.9	3	101	[NT]
Nitrogen (N_2)	%	0.5	AT-003	<0.5	1	76	76	0	99	[NT]
Carbon Monoxide (CO)	%	0.01	AT-003	<0.01	1	<0.01	<0.01	0	75	[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.

Where matrix spike recoveries fall below the lower limit of the acceptance criteria (e.g. for non-labile or standard Organics <60%), positive result(s) in the parent sample will subsequently have a higher than typical estimated uncertainty (MU estimates supplied on request) and in these circumstances the sample result is likely biased significantly low.

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.

ASA Investigation Report Tables

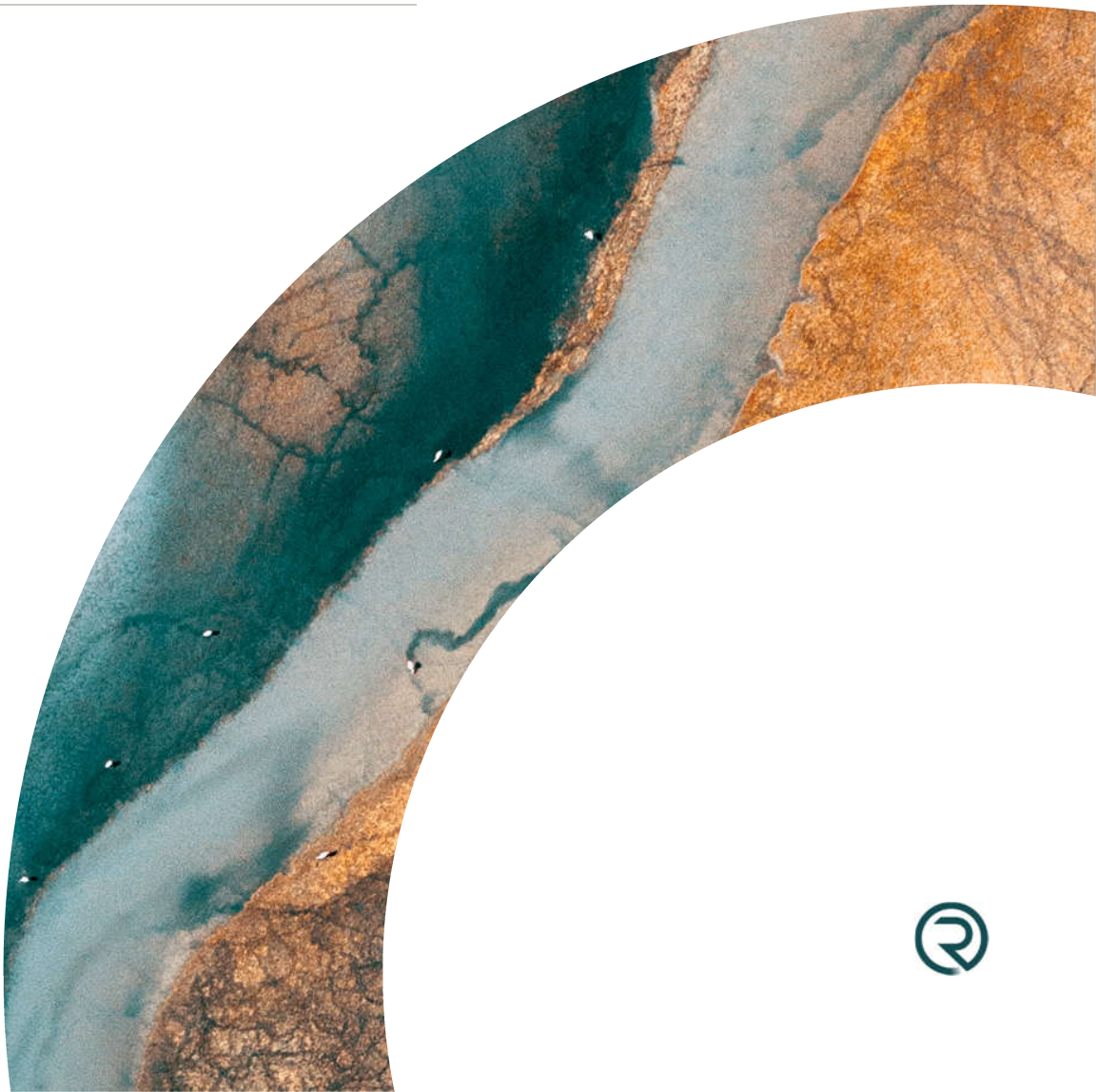


Figure 3.1 Sampling Locations.

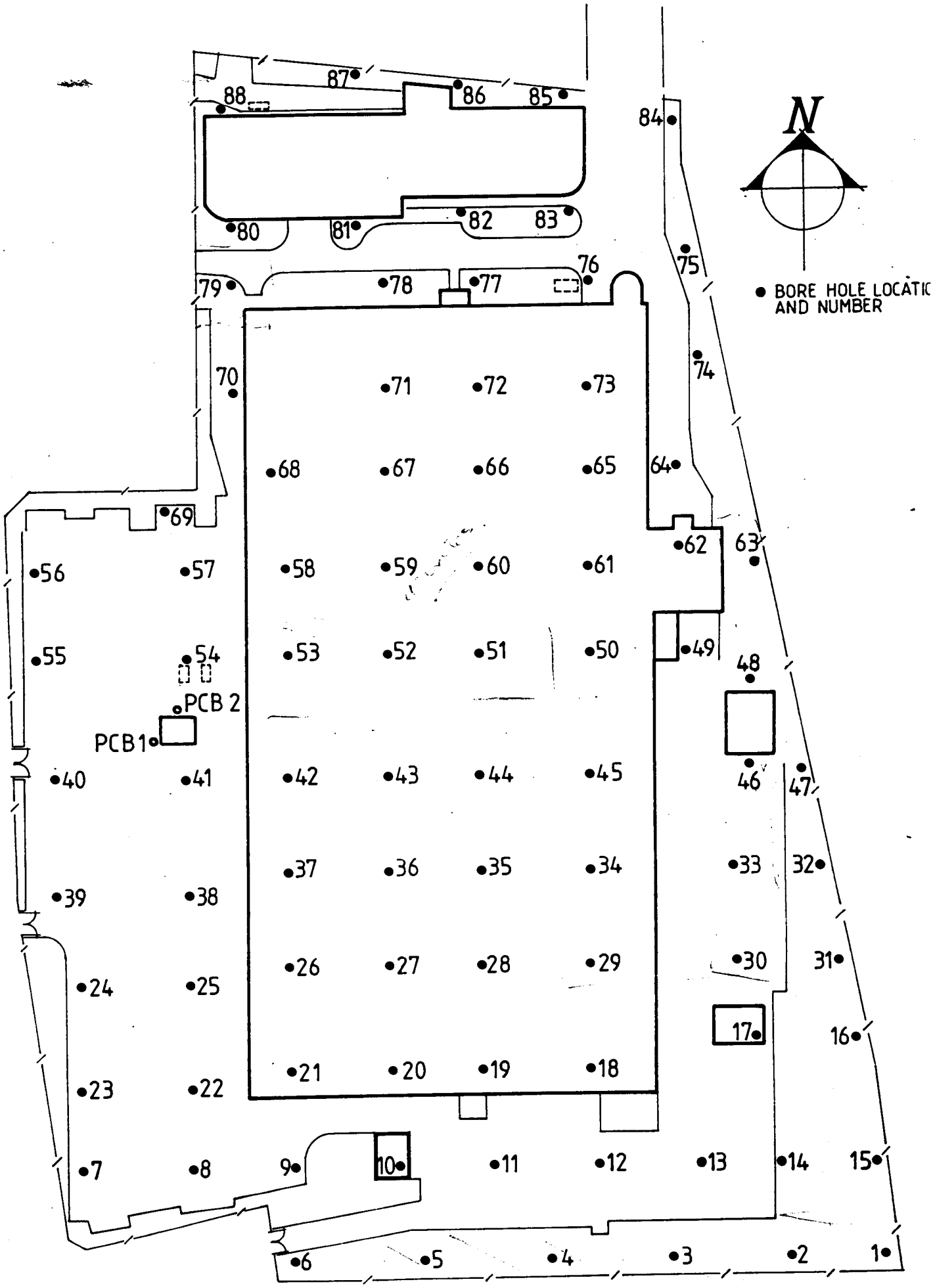


Table 4.1 Summary of soil investigations and analytical results - Metals

Sample Location, Bore Number.	Date Sampled	Sample Depth (mm)	Nickel mg/kg	Chromium ntg/kg	Copper mg/kg	Lead mg/kg	Zinc mg/kg	Cadmium mg/kg	Mercury mg/kg	Arsenic mg/kg
1	5.12.94	300	6.4	16	**71**	67	**300**	<**0.2**	<0.1	**21**
2	5.12.94	300	8.4	25	37	**690**	**490**	1.5	<0.1	**45**
Duplicate	5.12.94	300	**8.6**	26	38	**730**	**540**	2.1	**0.2**	**55**
3	5.12.94	400-700	7.3	**20**	26	25	**340**	**0.6**	<0.1	**31**
4	5.12.94	400	<5	10	28	40	190	0.4	<0.1	**36**
5	5.12.94	300	**8.8**	24	27	45	140	<**0.2**	<0.1	**26**
6	5.12.94	300	**8.2**	17	37	27	61	<**0.2**	<0.1	**8.2**
7	5.12.94	300	**22**	38	26	44	49	<**0.2**	<0.1	7.9
8	5.12.94	600	<5	**20**	38	34	29	<**0.2**	<0.1	**8.0**
9	5.12.94	600	<5	11	40	16	29	<**0.2**	<0.1	**2.0**
10	6.12.94	400	44	70	50	65	**650**	0.7	<0.1	11
11	6.12.94	450-600	15	9.6	38	**20**	57	<**0.2**	<0.1	5.0
	6.12.94	450-700	13	9.0	39	21	58	<**0.2**	<0.1	5.7
12	6.12.94	600	39	30	52	**20**	67	<**0.2**	<0.1	4.7
13	6.12.94	450	40	40	34	17	40	<**0.2**	<0.1	3.0
14	6.12.94	450	21	8.9	45	18	150	<**0.2**	<0.1	<2
15	5.12.94	250	13	45	**340**	120	**780**	0.9	<0.1	**71**
16	6.12.94	300	10	74	**170**	47	**280**	0.3	0.3	27
17	6.12.94	600	36	11	40	27	40	<**0.2**	<0.1	<2
18	8.12.94	400	12	12	77	**22**	80	<**0.2**	<0.1	4.6
	8.12.94	450	12	13	79	23	82	<0.2	<0.1	4.4
19	8.12.94	450	19	13	42	24	47	<0.2	<0.1	7.0
	8.12.94	600	11	9.7	32	21	44	<0.2	<0.1	6.7
20	8.12.94	600	<5	12	65	56	31	<**0.2**	<0.1	20
	8.12.94	700	<5	11	23	46	27	<**0.2**	<0.1	**24**
21	8.12.94	600	7.8	30	47	29	32	<**0.2**	<0.1	<2
22	5.12.94	400	48	**51**	43	26	78	<**0.2**	<0.1	9.2
23	5.12.94	400	**62**	**61**	34	29	61	0.4	<0.1	**8.6**
24	5.12.94	800	13	30	25	31	51	<**0.2**	<0.1	12
Duplicate	5.12.94	800	23	43	28	30	36	<**0.2**	<0.1	14
25	5.12.94	600	33	36	74	42	79	0.3	<0.1	15
26	N/A	N/A								
27	N/A	N/A								
28	8.12.94	450	40	17	38	45	120	**0.2**	<0.1	**<2**
29	8.12.94	400	<5	11	56	19	37	<**0.2**	<0.1	3.8
	8.12.94	600	<5	9.7	43	17	36	<**0.2**	<0.1	2.7

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.1(continue) Summary of soil investigations and analytical results Metals

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Nickel mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Zinc mg/kg	Cadmium mg/kg	Mercury mg/kg	Arsenic mg/kg
30	6.12.94	600	65	71	41	16000	42	0.2	<0.1	31
31	5.12.94	400	25	41	160000	760	3400	<0.2	<0.1	77
32	6.12.94	350	19	44	3000	200	4100	<0.2	0.4	<2
33	6.12.94	650	13	17	22	15	16	<0.2	<0.1	7.8
34	8.12.94	650	11	33	21	25	36	<0.2	<0.1	17
	8.12.94	800	7.8	32	19	36	39	<0.2	<0.1	17
35	8.12.94	600	22	42	29	31	60	<0.2	<0.1	15
36	8.12.94	150	20	39	24	29	63	0.5	<0.1	16
	8.12.94	400	5.9	24	18	30	36	<0.2	<0.1	7.8
37	8.12.94	400	21	38	18	40	68	<0.2	<0.1	8.3
38	5.12.94	800	19	34	39	59	82	0.2	<0.1	7.8
39	5.12.94	500	32	45	33	60	74	<0.2	<0.1	10
40	6.12.94	600	26	43	25	2	52	<0.2	<0.1	11
41	5.12.94	250	62	70	37	12	53	<0.2	<0.1	6.9
42	8.12.94	400	13	32	15	23	89	<0.2	<0.1	12
	8.12.94	600	19	33	15	24	180	<0.2	<0.1	11
43	8.12.94	600	24	41	19	27	59	<0.2	<0.1	11
44	8.12.94	600	21	31	16	27	39	<0.2	<0.1	9.1
45	8.12.94	400-600	24	31	19	27	48	<0.2	<0.1	10
46	6.12.94	350	24	11	70	18	46	0.3	<0.1	<2
	6.12.94	400	24	11	49	17	40	<0.2	<0.1	5.0
47	5.12.94	200	11	20	520	71	400	0.3	<0.1	14
48	6.12.94	250	38	17	95	20	56	<0.2	0.1	3.7
49	7.12.94	250	8.0	16	39	28	43	<0.2	<0.1	18
	7.12.94	400	9.3	13	38	25	47	<0.2	<0.1	16
50	7.12.94	400	11	34	18	34	22	<0.2	<0.1	9.5
	7.12.94	700	12	33	19	34	32	<0.2	<0.1	10
51	7.12.94	500	9.4	26	15	27	25	<0.2	<0.1	9.8
Duplicate	7.12.94	500	9.2	26	18	22	26	0.3	<0.1	8.2
	7.12.94	800	5.9	32	16	120	120	<0.2	<0.1	11
	7.12.94	10	7.0	36	9.5	23	19	<0.2	<0.1	13
52	7.12.94	800	7.8	38	13	22	19	<0.2	<0.1	14
53	7.12.94	400	<5	35	16	1500	26	<0.2	<0.1	31
	7.12.94	800	5.5	38	18	1600	29	<0.2	<0.1	16
54	5.12.94	510	23	43	22	26	37	<0.2	<0.1	11
55	6.12.94	600	7.8	18	54	30	77	<0.2	<0.1	5.7
56	5.12.94	600	20	39	30	51	80	<0.2	<0.1	6.7
57	5.12.94	600	22	41	49	110	160	<0.2	<0.1	15

Note : Highlighted concentrations are above ANZECC B Levels.

Table 4.1 (continue) Summary of soil investigations and analytical results Metals

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Nickel mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Zinc mg/kg	Cadmium mg/kg	Mercury mg/kg	Arsenic mg/kg
58	7.12.94	600	6.4	38	9.5	27	19	<0.2	<0.1	9.0
	7.12.94	800	7.6	44	12	31	150	<0.2	<0.1	14
59	8.12.94	400-600	12	33	14	27	21	<0.2	<0.1	7.8
60	7.12.94	400	11	41	22	49	72	<0.2	<0.1	13
	7.12.94	600	13	41	21	45	64	<0.2	<0.1	17
	7.12.94	10	5.5	15	22	120	91	<0.2	<0.1	5.2
61	7.12.94	400	14	47	17	31	38	<0.2	<0.1	21
	7.12.94	600	15	45	17	30	35	<0.2	<0.1	18
62	8.12.94	600	9.5	20	24	25	31	<0.2	<0.1	16
Duplicate	8.12.94	600	8.2	18	21	24	30	<0.2	<0.1	11
63	7.12.94	10	15	17	66	53	68	<0.2	<0.1	15
	7.12.94	300	15	26	350	48	76	<0.2	<0.1	12
64	7.12.94	600	21	36	180	56	69	<0.2	<0.1	21
	7.12.94	800	23	42	77	36	80	<0.2	<0.1	25
65	8.12.94	300	34	54	24	31	97	<0.2	<0.1	10
	8.12.94	400	43	55	31	31	120	<0.2	<0.1	13
66	7.12.94	250	14	46	63	37	60	<0.2	<0.1	27
	7.12.94	600	11	54	61	40	56	<0.2	<0.1	48
	7.12.94	10	20	57	46	54	140	<0.2	<0.1	17
67	8.12.94	600	29	54	21	29	78	<0.2	<0.1	12
	8.12.94	800	34	55	28	27	100	<0.2	<0.1	5.7
68	7.12.94	600	35	57	24	35	68	<0.2	<0.1	4.7
	7.12.94	800	26	57	22	30	53	<0.2	<0.1	5.8
69	6.12.94	600	28	44	16	28	53	<0.2	<0.1	6.9
70	6.12.94	600	13	33	18	38	140	<0.2	<0.1	2.3
71	7.12.94	200	17	46	19	36	79	<0.2	<0.1	13
	7.12.94	600	22	47	20	31	73	<0.2	<0.1	8.4
	7.12.94	10	24	53	30	43	110	<0.2	<0.1	9.7
72	7.12.94	400	19	50	42	42	72	<0.2	<0.1	13
Duplicate	7.12.94	400	21	58	23	33	53	<0.2	<0.1	14
	7.12.94	700	15	39	79	50	96	<0.2	<0.1	12
	7.12.94	10	25	65	34	84	170	<0.2	<0.1	20
Duplicate	7.12.94	10	18	48	27	170	130	<0.2	<0.1	5.6
73	8.12.94	600	17	42	23	29	31	<0.2	<0.1	11
	8.12.94	800	17	46	26	28	31	<0.2	<0.1	7.6
	8.12.94	1000	19	40	29	45	44	<0.2	<0.1	13
74	7.12.94	600	11	13	72	57	59	0.6	<0.1	19
	7.12.94	700	14	10	44	52	55	0.3	<0.1	13
75	7.12.94	400	11	6.7	58	24	100	0.5	<0.1	16
Duplicate	7.12.94	400	11	7.2	62	25	100	<0.2	<0.1	16
76	6.12.94	200	<5	7.6	9.5	19	71	<0.2	<0.1	8.3
	6.12.94	600	<5	6.1	5.4	19	55	<0.2	<0.1	8.0
77	6.12.94	600	8.0	30	17	25	17	<0.2	<0.1	9.5
78	5.12.94	450	8.0	23	21	40	450	<0.2	<0.1	10
79	6.12.94	300	11	35	110	240	1100	1.2	<0.1	10
80	6.12.94	350-600	6.3	27	18	32	47	<0.2	<0.1	16
81	6.12.94	500	12	15	16	280	26	<0.2	0.3	6.4
Duplicate	6.12.94	550	18	31	36	53	130	0.6	<0.1	11
82	6.12.94	600	5.1	27	18	30	17	<0.2	<0.1	15
83	6.12.94	450	11	33	18	30	25	<0.2	<0.1	17
84	7.12.94	600	8.5	28	19	25	24	0.2	<0.1	10
	7.12.94	800	<5	30	50	21	21	<0.2	<0.1	14
85	7.12.94	600	12	34	45	32	100	1.0	<0.1	31
	7.12.94	800	9.5	31	120	31	82	<0.2	<0.1	19

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.1 (continue) Summary of soil investigations and analytical results Metals

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Nickel mg/kg	Chromium mg/kg	Copper mg/kg	Lead mg/kg	Zinc mg/kg	Cadmium mg/kg	Mercury mg/kg	Arsenic mg/kg
86	7.12.94	350	21	31	76	43	88	0.2	<0.1	11
	7.12.94	600	7.7	28	23	37	33	<0.2	<0.1	13
87	7.12.94	700	10	37	16	28	22	0.4	<0.1	12
	7.12.94	800	11	37	19	30	21	0.4	<0.1	10
88	7.12.94	400-650	10	35	20	36	39	0.3	<0.1	13
Duplicate	7.12.94	400-650	13	35	21	35	64	0.3	<0.1	18
	7.12.94	10	18	39	35	42	87	<0.2	<0.1	15

Table 4.2 Summary of soil investigations and analytical results - Total Petroleum Hydrocarbons.

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	C_6-C_9	> C_9-C_{14}	> C_{14}-C_{28}	> C_{28}-C_{36}
10	6.12.94	400	<20	<20	<50	<50
25	5.12.94	600	<20	<20	<50	<50
31	5.12.94	400	<20	<20	<50	<50
38	5.12.94	800	<20	<20	<50	<50
41	5.12.94	250	<20	<20	<50	<50
72	7.12.94	400	<20	<20	<50	<50
76	6.12.94	200	<20	<20	<50	<50
78	5.12.94	450	<20	<20	<50	<50
88	7.12.94	400	<20	<20	<50	<50
PCB2	5.12.94	250	<20	<20	<50	<50

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.3 Summary of soil investigations and analytical results - Volatile Organics (MAH)

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg
10	6.12.94	400	<0.5	<0.5	<0.5	<0.5
25	5.12.94	600	<0.5	<0.5	<0.5	<0.5
31	5.12.94	400	<0.5	<0.5	<0.5	<0.5
38	5.12.94	800	<0.5	<0.5	<0.5	<0.5
41	5.12.94	250	<0.5	<0.5	<0.5	<0.5
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5
72	7.12.94	400	<0.5	<0.5	<0.5	<0.5
76	6.12.94	200	<0.5	<0.5	<0.5	<0.5
78	5.12.94	450	<0.5	<0.5	<0.5	<0.5
88	5.12.94	400	<0.5	<0.5	<0.5	<0.5
PCB2	5.12.94	250	<0.5	<0.5	<0.5	<0.5

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.4 Summary of soil investigations and analytical results - Chlorinated Hydrocarbons.

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Benzal Chloride	Benzo tri-chloride	Benzyl Chloride	2-Chloro-napth-alene	1,2 - Dichloro-benzene	1,3- Dichloro-benzene	1,4- Dichloro-benzene	Hexa-chloro-benzene
3	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
31	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
38	5.12.94	800	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
49	7.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table continued below

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Hexa-chloro-buta-diene	Hexa-chloro-cyclo - hexane	Hexa-chloro-cyclopent-adiene	Hexa-chloro ethane	Tetra-chloro-benzene	1,2,4-Tri-chloro-benzene	Penta chloro-benzene
3	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
31	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
38	5.12.94	800	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
49	7.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.5 Summary of soil investigations and analytical results - Volatile Halogenated organics

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	1,1 Dichloro-ethane	Methylene Chloride	Chloroform	1,2 Dichloro-propane	1,2 Dichloro-ethane	Bromo dichloro methane	Chloro benzene
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table continued below

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	1,1,2-Trichloro ethane	Chloro dibromom ethane	1,2 Dichloro benzene	1,3 Dichloro benzene	1,4 Dichloro benzene
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.6 Summary of soil investigations and analytical results - Polycyclic Aromatic Hydrocarbons

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Naph-thylene	Acenaph-thylene	Fluo-rene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a) anthra-cene	Chrys-ene
3	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
31	5.12.94	400	<0.5	<0.5	<0.5	**2.1**	**0.6**	**5.6**	**6.2**	**2.7**	**1.8**
38	5.12.94	800	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
46	6.12.94	350	<0.5	<0.5	<0.5	**0.5**	<0.5	**1.8**	**1.8**	**0.9**	**0.7**
49	7.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0:5	<0.5	<0.5

Table continued below

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Benzo(k) fluoran-thene	Benzo(a) pyrene	Indeno (123-cd) pyrene	Dibenzo-(ah) antra-cene	Benzl-(ghi) pery-lene	TOTAL PAH
3	5.12.94	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
31	5.12.94	400	**3.8**	**3.8**	**2.4**	<0.5	**3.1**	**34**
38	5.12.94	800	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
46	6.12.94	350	**1.6**	**1.0**	**0.8**	<0.5	**1.1**	**10**
49	7.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.7 Summary of soil investigations and analytical results - Polychlorinated Biphenyls

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	PCB's (Arochlor Number) 1016	1221	1232	1242	1248	1254	1260	Total PCB's
3	5.12.94	400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
31	5.12.94	400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
38	5.12.94	800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
46	6.12.94	350	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
49	7.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB1	5.12.94	200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB2	5.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB2A	5.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.8 Summary of soil investigations and analytical results - Organochlorine Pesticides and Phenols.

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	HCB	Lindane	Hepta-chlor	Aldrin	Hepta-chloro-epoxide	DDE	Dieldrin	Endrin	DDD	DDT	Total Pesticide	Phenols
1	5.12.94	300												0.2
2	5.12.94	300												0.1
	5.12.94	300												<0.1
3	5.12.94	400												0.2
4	5.12.94	400												0.3
5	5.12.94	300												0.3
6	5.12.94	300												0.1
9	5.12.94	600												<0.1
11	6.12.94	600												0.2
12	6.12.94	600												0.1
13	6.12.94	450												<0.1
15	5.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
29	8.12.94	400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**4.3**	<0.1	<0.1	<0.1	**4.3**	
29	8.12.94	600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**4.0**	<0.1	<0.1	<0.1	**4.0**	
31	5.12.94	400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
36	8.12.94	150	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
44	8.12.94	600	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
47	5.12.94	200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
63	7.12.94	300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	**0.1**	<0.1	<01	<0.1	<0.1	
65	8.12.94	300	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<01	<0.1	<0.1	
71	7.12.94	200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<01	<0.1	<0.1	
75	7.12.94	400	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
PCB1	5.12.94	200	<0.1	<0.1	<0.1	<0.1	<0.1	**1.2**	<0.1	<0.1	**0.2**	**0.3**	**1.7**	
PCB2	5.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1	**0.9**	<0.1	<0.1	**0.3**	<0.1	**1.2**	
PCB2A	5.12.94	250	<0.1	<0.1	<0.1	<0.1	<0.1							

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.9 Summary of soil investigation and analytical results - Solvent Scan

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Acetone	Acrylo-nitrite	Methyl ethyl ketone	Iso-propyl alcohol	MIBK	2-Ethyl hexyl acrylate	Tri-chloro-ethane	Tri-chloro ethylen
46	6.12.94	350	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
48	6.12.94	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.10 Summary of soil investigations and analytical results - Organophosphate Pesticides

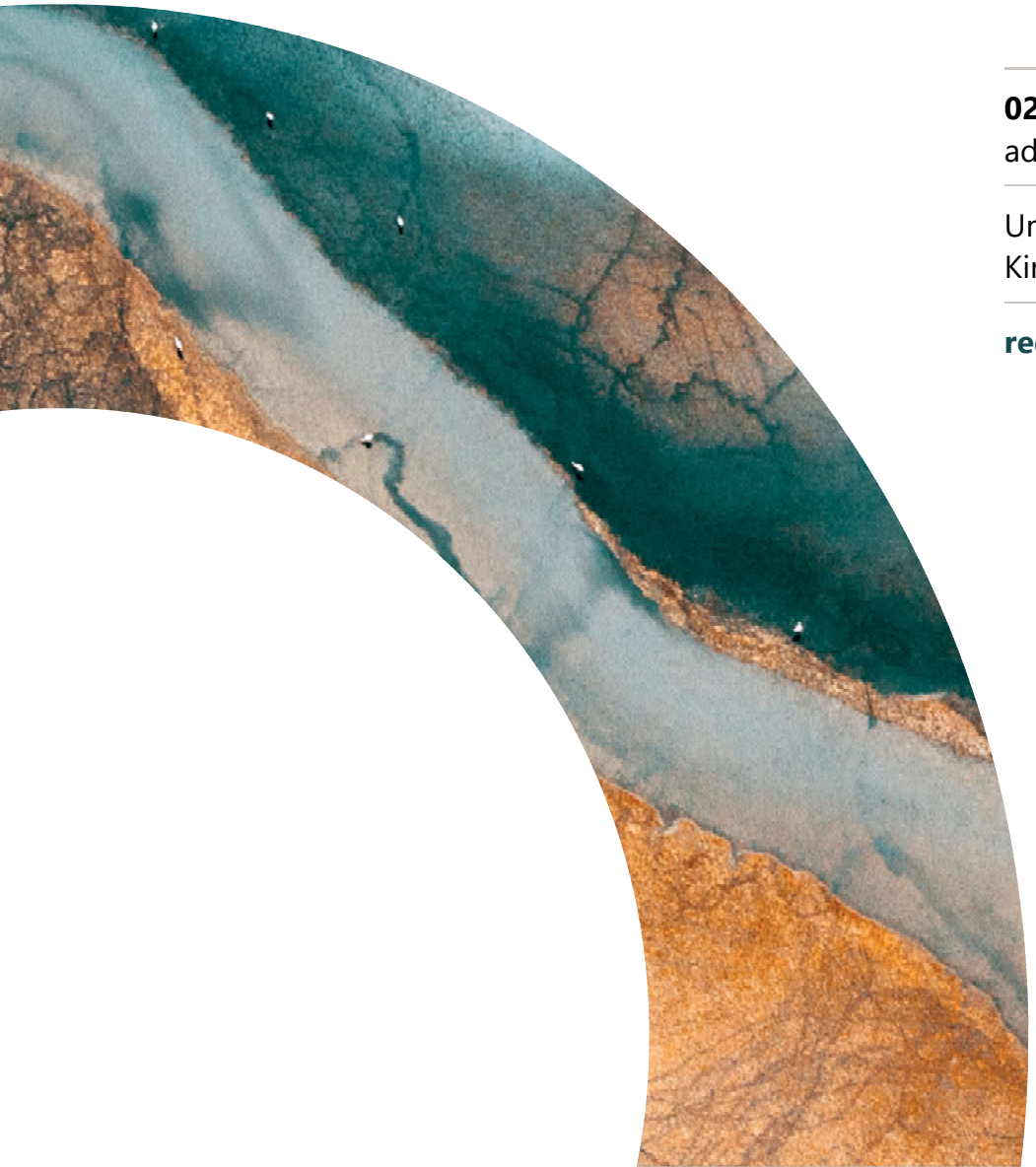
Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Organophosphate Pesticides	Compound
15	5.12.94	250	<0.5	
29	8.12.94	400	<0.5	
29	8.12.94	400	<0.5	
31	5.12.94	400	**1.5**	**DIAZINON**
36	8.12.94	150	<0.5	
44	8.12.94	600	<0.5	
47	5.12.94	200	<0.5	
63	7.12.94	300	<0.5	
65	8.12.94	300	<0.5	
71	7.12.94	200	<0.5	
75	7.12.94	400	<0.5	

Note: Highlighted concentrations are above ANZECC B Levels.

Table 4.11 Summary of soil investigations and analytical results - Asbestos

Sample Location, Bore Number	Date Sampled	Sample Depth (mm)	Asbestos
1	5.12.94	300	No Asbestos Detected
2	5.12.94	300	No Asbestos Detected
	5.12.94	500	No Asbestos Detected
3	5.12.94	400	No Asbestos Detected
4	5.12.94	400	No Asbestos Detected
5	5.12.94	300	**Chrysotile Asbestos Detected**
6	5.12.94	300	No Asbestos Detected
9	5.12.94	600	No Asbestos Detected
11	6.12.94	450	No Asbestos Detected
12	6.12.94	600	No Asbestos Detected
13	6.12.94	450	No Asbestos Detected
51	7.12.94	500	No Asbestos Detected
	7.12.94	10	**Chrysotile Asbestos Detected**
60	7.12.94	400	No Asbestos Detected
	7.12.94	10	No Asbestos Detected
61	7.12.94	400	No Asbestos Detected
	7.12.94	600	No Asbestos Detected
66	7.12.94	10	No Asbestos Detected
	7.12.94	250	No Asbestos Detected
71	7.12.94	10	No Asbestos Detected
72	7.12.94	10	No Asbestos Detected

Note: Highlighted concentrations are above ANZECC B Levels.



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