Detailed Site Investigation

Gillieston Public School Redevelopment
and New Public Preschool

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Prepared for:

Department of Education

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Activity

The Gillieston Public School have been identified by the NSW Department of Education (DoE) as requiring redevelopment. The proposed Gillieston Public School Redevelopment and new public preschool is driven by service need including increase in expected student enrolments and the and removing demountable structure and replacement with permanent teaching spaces.

The Gillieston Public School redevelopment and new public preschool comprises the following:

- Demolition and removal of existing temporary structures.
- Site preparation activity, including demolition, earthworks, tree removal.
- Construction of new:
  - 32 permanent general learning spaces and 3 support teaching spaces
  - Administration and staff hubs
  - Hall, canteen and library
  - Out of school hours care
  - Public preschool (standalone building for 60 places)
  - Covered Outdoor Learning Areas (COLAs)
  - Outdoor play areas, including games courts and yarning circle
  - New at-grade car parking
  - Extension of the existing drop-off / pick-up area and new bus bay
  - Realignment of the existing fencing
  - Associated stormwater infrastructure upgrades
  - Associated landscaping
  - Associated pedestrian and road upgrade activity

Executive Summary

Stantec Australia Pty Ltd (Stantec) was engaged by Department of Education (DoE) to complete a Detailed Site Investigation (DSI) for Gillieston Public School, located at 100 Ryans Road and 19 Northview Street, Gillieston Heights, legally identified as Lot 51 Deposited Plan (DP) 1162489 and Lot 2 DP1308605. The site location is depicted on **Figure 1** and the site layout shown on **Figure 2** of **Appendix A**. The DSI was supplementary to previous investigations and should be read in conjunction with existing reports.

The site is located in the Hunter region NSW, suburb of Gillieston Heights, which is within the Maitland LGA. It is bordered by Gillieston Road to the north, Ryans Road to the west, Northview Road to the south and is surrounded primarily by open space and agricultural land, with one residence to the north and a low-density residential area to the south/south-east, as shown in **Appendix A**.

Stantec was initially engaged by DoE to complete a Preliminary Geotechnical Desktop Review (Stantec, 2023a), Intrusive Geotechnical Report (Stantec 2023b) and Preliminary Desktop Site Investigation – Contamination (PDSIC) (Stantec, 2023c) for the site under work order DDWO03878/22. A more detailed review of each document is provided in **Section 3.0**, however, during the initial combined geotechnical and contamination intrusive investigation, exceedances of the applicable land use criteria were observed in samples for lead, nickel and zinc. A brief summary of background information of relevance to this DSI report is provided below:

- Additional Data Gap Investigations were conducted to delineate the extent of metal impacted soils on site. Further intrusive works identified that soils within the north-western portion of the site, surrounding ‘Building D’ were impacted by lead above the applicable human health screening criteria, as well as nickel and zinc above applicable ecological screening criteria. Additionally, one bonded fragment of asbestos containing material (ACM) was identified within surficial fill materials from sample location HA331, and subsequent laboratory analysis of soil from that location identified friable asbestos (in the form of asbestos fines (AF) and fibrous asbestos (FA)).
- Due to the presence of contamination (bonded ACM, friable asbestos, lead, zinc, and nickel) identified in the PDSIC (Stantec, 2023c) above applicable screening criteria, DoE requested Stantec to prepare a Remediation Action Plan (RAP) (Stantec, 2023d) that outlined the options and steps required for remediation and validation of the site for the current and proposed site use as a school with associated infrastructure.
  - The initial PDSIC (Stantec, 2023c) was utilised to inform the concept design process.
- Stantec was engaged as the validation consultant for the site remedial works, which included validating the site in accordance with the RAP (2023d). Remedial works were conducted during April and May of 2023, and are still ongoing as lead impacted soils above applicable human health criteria remain located beneath site structures. These materials were unable to be accessed, and as such Stantec and DoE agreed to place the remedial works on hold while the detailed design for the

proposed activity advanced and to complete the remaining remediation as part of bulk earthworks/ construction (post-demolition).

- As a preliminary and interim management measure to ensure site users did not interact with lead impacted soils, Stantec supervised the importation of suitable material that was utilised as fill and orange geofabric placed within excavations to identify areas in which contamination still exists.
- Stantec received an email from DoE on the 11/03/2024 with a request for additional works at Gillieston Public in the form of Detailed Site Investigation (DSI) to assess areas proposed for and as indicated by the figure in **Appendix B**.
- Additionally, a cut & fill plan was provided and outlines areas in which bulk earthworks will take place as part of the proposed activity, with DoE requesting additional investigation in areas that extend beyond 0.45m bgl. The cut and fill plan is provided in **Appendix C**.
- It was noted that the previous Conceptual Site Model (CSM) provided in the RAP (Stantec 2023d) outlines the existing contamination sources for the site as hazardous building materials contained within former and existing site structures, and weathering of exposed building structures.
- Since previous investigations, the design has advanced, and these design features and planned areas of excavation are the subject of this investigation.
- Previous investigations at the site had been constrained by active school operations, buildings, structures and subsurface utilises. With the revised design the site soils planed for excavation could be assessed in greater detail, particularly the assessment of potential contaminants such as asbestos.

The proposed activity at the site broadly consists of the following:

- Construction of a building to be utilised as a learning hub, a library, administration and staff hub.
- Construction of additional buildings to be used pre school, OSHC facility, canteen and hall.
- Construction of associated infrastructure such as utilities and carparks.
- Bulk earthworks to achieve site levels and external works (i.e. landscaping and footpaths).

The objectives of the investigation were to:

- Undertake an intrusive investigation program to identify whether additional contamination impacts are present (further to those previously identified (Stantec, 2023c), and if so, to what extent; and
- Prepare a report to outline the results of the investigation and provide:
  - A statement on the suitability of the site for the proposed use; and
  - Recommendations on any future actions including management, remediation or further investigation (if required).

Based on observations, laboratory data and information gathered during previous investigations, the following is concluded:

- The DSI included the advancement and sampling from thirty-five sampling locations utilising both test-pitting and hand excavation methodologies as well as sampling surface water and sediments of the onsite water body (eastern boundary).

- An exceedance of applicable human health criteria for lead was identified in soil sample AHA103_0.35-0.4, which is considered a 'hotspot' as per the definition of Schedule B1 of the ASC NEPM. The vertical extent of contamination is currently unknown and the sampling point is located approximately 10 m east of an previously identified as lead impacted (refer to RAP, Stantec 2023e).
- Under the current and future land use, the lead concentration at AHA103 presents an unacceptable risk to human health for current and future site users and will require management. Conservatively, for remediation planning it should be considered that lead impacts are present from surface to 0.4 mBGL at and in the vicinity of AHA103, however, actual remediation extents are to be determined during remediation and validation of the site.
  - Until such time that site remediation and validation works have been completed and/or a long-term environmental management plan has been completed for the site, interim management of impacted soils is recommended not only for the impacts at AHA103 but for other locations within the site known to contain contamination (see recommendations below).
- Whilst asbestos has not been identified during this investigation, asbestos has been previously observed within some fill soils excavated within the north western portion of the site. Soils at the site have generally been assessed using hand tools due to constraints presented by current buildings, structures and subsurface utilities. This sampling methodology limits observations of subsoils and appropriate sampling opportunities to assess for asbestos, and as such it is considered that asbestos could existing in fill at some locations within the siteThere were no exceedances of the applicable ecological screening criteria in soil.
- There were no exceedances of applicable screening criteria in sediment.
- Exceedances of ecological criteria for total and dissolved copper and zinc, dissolved lead, total nickel and PFOS were reported within surface water samples collected from the dam. It is noted that the water catchment collects surface waters from the broader surrounds to the south (off-site), which is inferred upgradient. As such, waters within the dam may be subject to off-site influences. The dam is proposed to be filled with approximately 2m of material placed as part of the proposed activity. Under this activity scenario, these ecological exceedances do not present a complete source-pathway-receptor linkage.

From the findings of this investigation and previous investigations, with the exception of the areas identified as being impacted by lead in soil, indicatively shown on **Figure 6** in **Appendix A**, the site is suitable for the current and proposed land-use as school infrastructure. Based on current information, it is considered that the lead impacted soil can be made suitable following implementation of the recommendations outlined below, and the potential risk to site users in lieu of eventual remediation (post-approval) can be managed through implementation of an Interim Site Management Plan (or similar).Based on the findings of this assessment and with reference to the proposed activity, purpose and objectives of this investigation, the following recommendations were made:

- Stantec were advised by DoE that the construction timing for the proposed activity is anticipated to commence mid to late 2025, upon completion of the approvals process. Stantec understand that remediation and validation of the site is unlikely to occur until that time. However, to manage the

health and safety of current site users until that time, interim management controls are required, as outlined below:

  - An Interim Site Management Plan (or similar) should be prepared by a suitably qualified occupational hygienist to identify the risk areas and specify appropriate management controls and procedures to render the source-pathway-receptor linkages incomplete. All existing documents relating to contamination are to be supplied to the occupational hygienist.
  - The Plan should be prepared as soon as practicable and must be considerate of the known or potential site receptors including students and teachers, groundskeepers and maintenance staff. The approximate lateral extent of known and approximate contamination is shown on **Figure 6**, **Appendix A**, and it should be noted that soils beneath buildings and structures have not been assessed.
  - If the proposed activity were not to proceed as proposed, a more permanent management approach would be required such as further investigation and remediation of contaminated soils.
- A revised RAP or addendum to the existing RAP (Stantec (2023e) must be prepared to consider the findings of this investigation.
  - This approximate lateral extents for remediation are shown on **Figure 6**, **Appendix A**. Delineation can occur during implementation of the RAP, with final remediation extents to be determined during remedial activities and site validation.
  - Upon completion of the remediation works and successful soil validation, a Validation Report must be prepared in accordance with NSW EPA (2020), by a suitably qualified and experienced contaminated land professional.
  - Construction activities undertaken at the site must be planned and executed considerate of this DSI report and the revised/ addendum Remediation Action Plan (RAP).
- Areas of the site containing asbestos should be recorded under an asbestos management plan and associated register in accordance with SafeWork NSW requirements, inclusive of current buildings and structures, and any soils that are identified as being asbestos impacted.
- The management options and fate of waters and sediments within the dam require consideration by the civil construction contractor prior to commencement of construction activities.
- All future works should be conducted as per a suitable Construction and Environmental Management Plan (CEMP) to minimise potential risks to human health and the environment during implementation of the RAP.
- Where material is to be removed from the site as part of the RAP implementation and/ or future activity, waste classification assessments for such materials must occur in accordance with the NSW EPA Waste Classification Guidelines (2014) or an applicable resource recovery order/exemption.
- Any material being removed from site be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order.

Abbreviations

ACM	Asbestos Containing Material
AST	Aboveground Storage Tank
BoM	Bureau of Meteorology
BTEX	Benzene, toluene, ethylbenzene and xylenes
CBD	Central Business District
CLM	Contaminated Land Management
CSM	Conceptual Site Model
DBYD	Dial Before You Dig
DCP	Development Control Plan
DQI	Data Quality Indicators
DQO	Data Quality Objectives
EIL	Ecological Investigation Level
EPA	Environmental Protection Authority
ESL	Ecological Screening Level
HIL	Health Investigation Level
HSL	Health Screening Level
km	kilometres
LEP	Local Environmental Plan
LGA	Local Government Authority
LOR	Limit of Reporting
m	metres
mAHD	metres Australian Height Datum
mBGL	metres Below Ground Level
NATA	National Associated Testing Authority
NEMP	National Environmental Management Plan
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage
OPP	Organophosphorus Pesticides
PACM	Potentially Asbestos Containing Material
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyls
PID	Photoionization Detector
PoEO	Protection of the Environment Operations
Ppm	parts per million
QA/QC	Quality Assurance / Quality Control

RL	Reduced Level
RPD	Relative Percentage Difference
SEPP	State Environmental Planning Policies
SPR	Source – Pathway – Receptor
SWL	Static / Standing Water Level
SWMS	SafeWork Method Statement
TfNSW	Transport for New South Wales
TRH	Total Recoverable Hydrocarbons
UST	Underground Storage Tanks
VOC	Volatile Organic Compounds



1.0 INTRODUCTION

Stantec Australia Pty Ltd (Stantec) was engaged by Department of Education (DoE) to complete a Detailed Site Investigation (DSI) for Gillieston Public School, located at 100 Ryans Road and 19 Northview Street, Gillieston Heights, legally identified as Lot 51 Deposited Plan (DP) 1162489 and Lot 2 DP1308605 and herein referred to as 'the site'. The site location is depicted on **Figure 1** and the site layout shown on **Figure 2** of **Appendix A**.

The site is located in the Hunter region NSW, suburb of Gillieston Heights, which is within the Maitland LGA. It is bordered by Gillieston Road to the north, Ryans Road to the west, Northview Road to the south and is surrounded primarily by open space and agricultural land, with one residence to the north and a low-density residential area to the south/south-east, as shown in **Appendix A**.

The scope of work for this investigation was completed in accordance with work order Contract Variation 3 – DDWO04011/22: Gillieston PS Geotech and Contamination panel.

1.1 BACKGROUND

Stantec was initially engaged by DoE to complete a Preliminary Geotechnical Desktop Review (Stantec, 2023a), Intrusive Geotechnical Report (Stantec 2023b) and Preliminary Desktop Site Investigation – Contamination (PDSIC) (Stantec, 2023c) for the site under work order DDWO03878/22. A more detailed review of each document is provided in **Section 3.0**, however, during the initial combined geotechnical and contamination intrusive investigation, exceedances of the applicable land use criteria were observed in samples for lead, nickel and zinc. A brief summary of background information of relevance to this DSI report is provided below:

- Additional Data Gap Investigations were conducted to delineate the extent of metal impacted soils on site. Further intrusive works identified that soils within the north-western portion of the site, surrounding 'Building D' were impacted by lead above the applicable human health screening criteria, as well as nickel and zinc above applicable ecological screening criteria. Additionally, one bonded fragment of asbestos containing material (ACM) was identified within surficial fill materials from sample location HA331, and subsequent laboratory analysis of soil from that location identified friable asbestos (in the form of asbestos fines (AF) and fibrous asbestos (FA)).
- Due to the presence of contamination (bonded ACM, friable asbestos, lead, zinc, and nickel) identified in the PDSIC (Stantec, 2023c) above applicable screening criteria, DoErequested Stantec to prepare a Remediation Action Plan (RAP) (Stantec, 2023d) that outlined the options and steps required for remediation and validation of the site for the current and proposed site use as a school with associated infrastructure.
  - The initial PDSIC (Stantec, 2023c) was utilised to inform the concept design process.

DETAILED SITE INVESTIGATION

Introduction

- Stantec was engaged as the validation consultant for the site remedial works, which included validating the site in accordance with the RAP (2023d). Remedial works were conducted during April and May of 2023, and are still ongoing as lead impacted soils above applicable human health criteria remain located beneath site structures. These materials were unable to be accessed, and as such Stantec and DoE agreed to place the remedial works on hold while the detailed design for the proposed activity advanced and to complete the remaining remediation as part of bulk earthworks/ construction (post-demolition).
- As a preliminary and interim management measure to ensure site users did not interact with lead impacted soils, Stantec supervised the importation of suitable material that was utilised as fill and orange geofabric placed within excavations to identify areas in which contamination still exists.
- Stantec received an email from DoE on the 11/03/2024 with a request for additional works at Gillieston Public in the form of Detailed Site Investigation (DSI) to assess areas proposed for the activity and as indicated by the figure in **Appendix B**.
- Additionally, a cut & fill plan was provided and outlines areas in which bulk earthworks will take place as part of the proposed activity, with DoE requesting additional investigation in areas that extend beyond 0.45m bgl. The cut and fill plan is provided in **Appendix C**.
- It was noted that the previous Conceptual Site Model (CSM) provided in the RAP (Stantec 2023d) outlines the existing contamination sources for the site as hazardous building materials contained within former and existing site structures, and weathering of exposed building structures.
- Since previous investigations, the design has advanced, and these design features and planned areas of excavation are the subject of this investigation.
- Previous investigations at the site had been constrained by active school operations, buildings, structures and subsurface utilises. With the revised design the site soils planed for excavation could be assessed in greater detail, particularly the assessment of potential contaminants such as asbestos.

1.2 PROPOSED ACTIVITY

At the time of preparing this report, the following was noted from the proposed Site Plan in **Appendix B** and Cut and Fill plan in **Appendix C**:

- The area in the north of the site planned for the activity indicates a large structure “Building C” is to be constructed and utilised as a library, administration and staff hub.
  - The area is approximately 4,350m^2.
- The southern area planned for redevelopment indicates there will be two buildings “Building A” which will be a preschool and “Building B” which will be a hall, canteen and Outside School Hours Care (OSHC) facility with a covered outdoor learning area structure attached.
  - The area is approximately 2,850m^2.
- An area previously unassessed (part-Lot part-Lot 213 DP 1186997) to the southeast is proposed to be developed into a staff carpark.
  - The area is approximately 2,750m^2.
- Furthermore, both the site plan and the cut-and-fill plan specify the addition of a car park at the northeastern boundary of the site and a basketball court in the northwestern area.

  - Currently the northeastern part of the site has not been investigated and is currently observed as an overgrown drainage line and dam.
  - The specified location of the basketball court lies within the lead remediation area, with some samples still containing exceedances above the current HIL A criteria.
- The cut and fill plans indicate that eastern and southeastern area of the site are to be filled to a maximum depth of 2.2m whereas the maximum cut depth of – 2.2m
- bgl is located in the central-eastern portion.
- The majority of the site cut and fill area appears to consist of site levelling with excavations from -0.4 m bgl to 0.4m.

The client has advised that the proposed activity is anticipated to begin in mid to late 2025 and is dependent on the approval pathway process.

1.3 PURPOSE AND OBJECTIVES

The purpose of this report is to further delineate known contamination, assess areas that are planned for excavation/ redevelopment and identify further actual or potential contamination within the site.

The objectives of this assessment and report included:

- Undertake an intrusive investigation program to identify whether additional contamination impacts are present (further to those previously identified (Stantec, 2023c), and if so, to what extent; and
- Prepare a report to outline the results of the investigation and provide:
  - A statement on the suitability of the site for the proposed use; and
- Recommendations on any future actions including management, remediation or further investigation (if required).

1.4 SCOPE OF WORK

Considering the findings from previous investigations, existing data and the current design/ earthworks plans, the following scope of work was undertaken:

1.4.1 Preliminaries

- Preparation of safety documentation and completion of a Before You Dig Australia (BYDA) (formerly Dial-Before-You-Dig) underground utilities search.
- A Telstra accredited underground service locater was engaged and carried out locating and marking of underground services in areas where intrusive sampling locations were proposed; and
- Coordination of site access, subcontractors and sampling equipment.

1.4.2 Fieldwork

Fieldwork completed at the site was delivered over several events, with previous fieldwork investigations and their findings summarized in **Section 3.0**. Fieldwork completed as part of the current investigation is summarized below:

- 22 April 2024 – A detailed site walkover inspection was undertaken by an experienced environmental scientist and contaminated land professional to assess for potential contamination sources that may have occurred since previous investigations.
- 22 April 2024 – Soil boring of fourteen (14) sample locations utilising hand tools (hand auger).
  - Thirteen (13) sample locations were advanced within the northwestern and western potion of the site to further delineate the known lead contamination.
  - One (1) sample location was advanced within the southern area proposed for redevelopment within an area inaccessible by excavator.
- 23 and 24 April 2024 – Advancing twenty-one (21) test-pits within the site, utilising a 5t tracked excavator.
  - Seven (7) test pits were advanced within the northern area proposed for redevelopment at 50% of the NSW EPA Sampling Design Part 1 – Application guidelines (2020). This lower density was considered suitable based on the number of existing samples advanced within this area without exceedances of HIL A criteria.
  - Three (3) test pits and one soil bore were advanced within the southern area proposed for redevelopment at 50% of the NSW EPA Sampling Design Part 1 – Application guidelines (2020). This lower density is considered suitable based on the number of existing samples advanced within this area without exceedances of HIL A criteria.
  - Three (3) test pits were situated within areas proposed for the maximum excavation depth of 2.2 m bgl as part of the proposed bulk earthworks.
  - Four (4) test pits were advanced in the previously unassessed northeastern portion of the site.
  - Four (4) test pits were advanced in the initially unassessed off-site area to the south-east at 50% of the NSW EPA Sampling Design Part 1 – Application guidelines (2020). This lower density is considered suitable based on the absence of historically contaminating activities and previous observations at the Gillieston Public School site.
- 29 April 2024 – surface water and sediment sampling was conducted from a dam located at the eastern extent of the site to assess for potential contamination.
- Soil samples were collected at near surface and 0.5 m intervals until target depth is achieved, with additional samples collected at change in strata and/or if contamination indicators (such as staining or odours) were observed.
- The soil profile at each test pit was logged on site in accordance with Australian Standard AS 1726:2017 – Geotechnical Site Investigations and excavated cuttings assessed on site for the presence of Volatile Organic Compounds (VOC) utilising a calibrated photo-ionisation detector (PID).
- Laboratory testing of soil, sediment and surface water samples at a National Association of Testing Authorities, Australia (NATA) accredited laboratory for analysis of Contaminants of Potential Concern

(CoPCs) as well as a broader range of contaminants in select samples. All samples were stored on ice in a sealed ice box (esky) while on site and in transit under chain of custody (COC) documentation.

1.4.3 Reporting

1.4.3.1 Detailed Site Investigation Report

Preparation of a Detailed Site Investigation (DSI) report (this report) in accordance with the NSW EPA *Consultants Reporting on Contaminated Land* (NSW EPA, 2020) and the *National Environment Protection (Assessment of Site Contamination) Measure* (1999) (NEPC, 2013).

1.5 APPLICABLE GUIDELINES AND LEGISLATION

This DSI was completed in consideration of the following guidelines made or approved by the NSW Environmental Protection Authority (EPA) under section 105 of the CLM Act 1997 and legislation:

- Contaminated Land Management Act 1997 (CLM Act);
- Protection of Environment Operations Act 1997 (PoEO Act);
- National Environment Protection (Assessment of Site Contamination) Measure (NEPM), amended 2013 (NEPC, 2013);
- NSW Department of Urban Affairs and Planning (2021) Managing Land Contamination: Planning Guidelines: SEPP Hazards and Resilience, 2021 (SEPP 55)
- Guidelines for Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, Western Australia Department of Health (WA DOH). 2009
- NSW Department of Planning and Environment, State Environmental Planning Policy (Resilience and Hazards) 2021
- NSW Environment Protection Authority Guidelines for the NSW Site Auditor Scheme, 3rd Edition (NSW EPA, 2017);
- NSW EPA Consultants Reporting on Contaminated Land: Contaminated Land Guidelines. New South Wales Environment Protection Authority, April 2020, Updated May 2020 (NSW EPA 2020)
- NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste;
- NSW EPA (2022) Sampling Design Part 1 – Application; Contaminated land guidelines (NSW EPA, 2022);
- NSW EPA (2022) Sampling Design Part 2 – Interpretation; Contaminated land guidelines (NSW EPA, 2022);
- Guidelines for the Assessment and Management of Groundwater Contamination, (Department of Environment and Conservation NSW 2007);
- Guidelines on the Duty to Report Contamination under the Contamination Land Management Act 1997 (NSW EPA, 2015).
- ASSMAC Acid Sulfate Soils Assessment Guidelines, Acid Sulfate Soils Management Advisory Committee, August 1998 (ASSMAC 1998)

DETAILED SITE INVESTIGATION

Introduction

2.0 SIGNIFICANCE OF ENVIRONMENTAL ASPECTS

Based on the identification of potential impacts and an assessment of the nature and extent of the impacts of the proposed activity, it is determined that all potential impacts can be appropriately mitigated to ensure that there is minimal impact on the locality, community and/or the environment.

See **Section 15.0** for further details.



3.0 SITE DETAILS

The site is identified as 100 Ryans Road and 19 Northview Street, Gillieston Heights, legally described as Lot 51 DP 1162489 and Lot 2 DP 1608605.

The site is located within the Maitland Local Government Area (LGA) and is zoned RU2 Rural Landscape and R1 General Residential zone under the provisions of the Maitland Local Environmental Plan 2011 (MLEP2011).

Existing attributes of the subject site are noted as follows:

- The subject site exhibits an area of approximately 23,385m² and is located in the suburb of Gillieston Heights;
- The subject site has a frontage to Ryans Road to the east, Gillieston Road to the north, and Northview Street to the south;
- In its existing state, the subject site comprises the existing Gillieston Public School. Existing school buildings are primarily located in the west portion of the subject site with a large area of open space situated in the eastern portion. There are limited permanent structures located on the subject site with thirteen (13) existing demountable classrooms currently occupying the subject site. Permanent buildings consist of the Main Administration Building, Original Brick Cottage, Library and GLS building located in the centre of the subject site; and
- Carparking is provided from Gillieston Road for staff. Pedestrian access is available via this main entrance from Gillieston Road and via a separate pedestrian-only access gates on Northview Street and Ryans Road.

The existing site context is shown in **Figure 1** and **Figure 2** below.

DETAILED SITE INVESTIGATION

Site Details

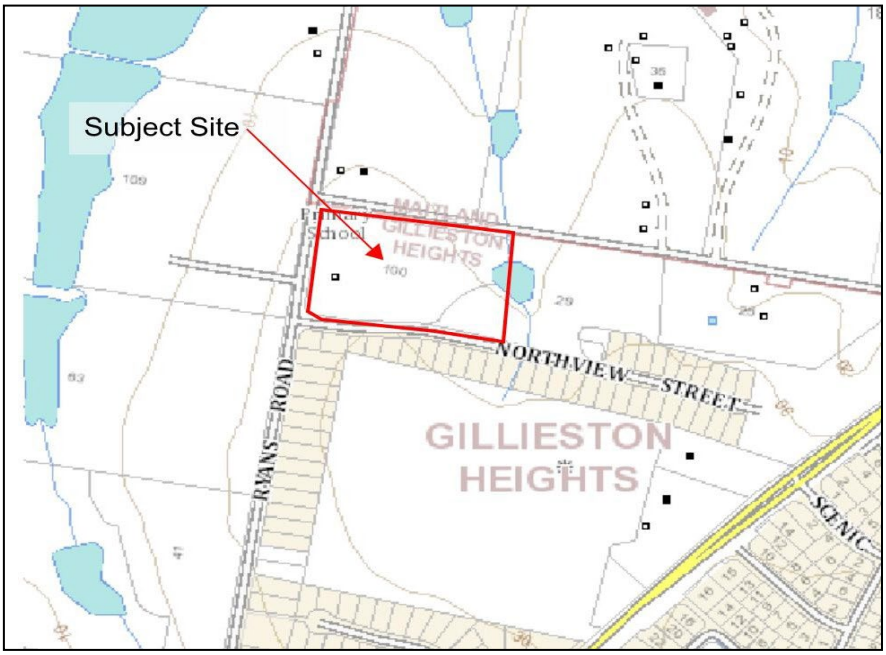


Figure 1 – Cadastral Map (Source: NSW Spatial Viewer, 2024)



Figure 2 – Site Aerial Map (Source: Near Map, 2024)

3.1 SITE IDENTIFICATION

Details related to the site at the time of completing the DSI are included in **Table 3-1** below, whist **Figure 1**, **Appendix A** shows the site locality in the context of the local area.

Table 3-1 Site information

Details	Comments	
Site address	100 Ryans Road and 19 Northview Street, Gillieston Heights, NSW, 2321	
Lot and Deposited Plan	Lot 51 DP 1162489 and Lot 2 DP1308605	
Local Government Authority (LGA)	Maitland Local Government Area	
Current land use	The site is currently a primary school (Gillieston Public). The site consists of multiple school buildings, grass and paved outdoor open space, other school infrastructure, car parks, and some localised vegetation.	
School operating hours	**Activity**	**Hours**
	Main School	8:45am to 3:05pm
	Preschool	8:45am to 3:05pm
	Before School Care	6:00am to 8:35am
	After School Care	3:05pm to 6:00pm
	Vacation Care (during school holidays)	6:00am to 6:00pm
Proposed land use	The site will use will continue being utilised as a school, with additional learning facilities such as an Outside School Hours Care (OSHC), preschool, a hall and canteen as well as associated infrastructure such as additional carparks. The design plans and bulk earthworks plans are provided in **Appendix B** and **Appendix C**, respectively.	
Current Zoning	RU2: Rural Landscape R1: General Residential	
Site area (ha)	2.3 ha	
Site coordinates (GDA2020 MGA56)	**Easting (m)**	**Northing (m)**
	924573.782	6367134.881
	924743.173	6367094.194
	924681.181	6366990.38
	924552.632	6367014.636

3.2 SURROUNDING LAND USE

The land uses immediately surrounding the site were identified during the site walkover inspection and desktop study and are summarised below in **Table 2-2** The site and surrounding land uses are shown in **Figure 2** in **Appendix A**.

Table 3-2 Surrounding Land Use

Direction	Land Use or Activity
North	Gillieston Road with one residence and agricultural land further north
East	Agricultural land with some residential properties further east
South	Northview Street with residences and open space surrounding further west
West	Ryans Road followed by agricultural land with sparse residences

3.3 REGIONAL AND SITE SETTINGS

Site setting information, as listed within publicly available data sets is summarised in **Table 3-3** below.

Table 3-3 Site Setting Information

Details	Comments
Topography (Nearmap, 2024)	A review of elevation data in Nearmap shows the site elevation ranging from 30m AHD on the southern boundary to 18m AHD in the north-east corner and 22m AHD in the north-west corner showing that the site generally slopes down to the north with a ridge running north-south through approximately the western third of the site and down to the east and west from that point. The NSW DPIE *eSPADE* v2.2 website shows the regional topography is rolling low hills with slopes ranging from 5–20%. Local relief is generally 50 m but ranging to 80 m. Elevation is 40–100 m. Rock outcrop is localised, often occurring where Muree Sandstone is present (<2%).
Regional Soil Landscape (NSW Department of Planning, Industry and Environment)	The NSW DPIE *eSPADE* v2.2 website indicates that the site overlies the Bolwarra Heights (bh) residual soil landscape. Soils within the Bolwarra Heights landscape consisted of shallow to moderately deep (<150 cm) yellow, red and brown podzolic soils and some moderately deep (<100 cm) well-drained Lithosols on crests, whilst moderately deep (<140 cm) yellow soloths are evident on lower slopes.
Regional Geology (Minview v. 2023.7.17, 2023)	The Newcastle 1:100,000 Geological Map, Herbert C, 1983, illustrates that the subject site ins underlain by Sandstone, siltstone, conglomerate, and erratics (Pmb) of the Branxton Formation, part of the Maitland Group from the Permian group of the Palaeozoic era.
Regional Groundwater (Department Finance, Services & Innovation 2024) (Bureau of Meteorology 2024)	Data sourced from WaterNSW and Bureau of Meteorology shows one groundwater bore within a 2000 m radius of the site: • GW201877 – located approximately 1260m to the north-east of the site. Installed as a stock and domestic bore in 1990 with a final depth of 26 metres. Bore is listed as functioning.

Details	Comments
Surface Water Bodies (Nearmap, 2024)	There is unnamed ephemeral drainage line located in the northeastern portion of the site that runs southeast to northwest. The second nearest surface water bodies to the site are multiple small to large private dams/ponds within approximately 500 m of the site, possibly used as livestock drinking water. The nearest named surface waterbody is Swamp Creek located approximately 800m to the north-east of the site and discharges into Wallis Creek which then flows into the Hunter River. The site and surrounds are mostly grassed, due to a ridge running through the site, surface water flows are inferred to flow predominantly north, with some north-east and north-west, generally towards Swamp Creek.
Acid Sulfate Soils (Department of Land and Water Conservation (1998) (Maitland Local Environmental Plan, 2011)	The NSW Government Planning Industry and Environment online mapping tool, *eSPADE* Version 2.2, indicates that the site is located within a soil class 5 ASS risk area, where acid sulfate soils are typically not found. Activities within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk. The nearest ASS risk is a class 2 area located approximately 250m west of the site in the vicinity of some of the nearby private dams. The Atlas of Australian Acid Sulfate Soils indicates the site is within a Class B area, with a low probability of occurrence (6-70%).
Salinity (Department Finance, Services & Innovation 2024)	When reviewing with the Dryland Salinity National Assessment data the site is mapped as a high hazard or risk defined for all years: 2000, 2020, 2050.

3.4 SITE DESCRIPTION

The site observations summarised below in **Table 3.4** have been recorded during completion of the DSI fieldwork activities. Photographs taken during the DSI investigation are provided in **Appendix D**.

Table 3-4 Site Description Details

Item	Information
Weather Conditions	22/04/2024: Overcast clearing to sunny, windy, 21°C. 23/04/2024: Overcast clearing to sunny, 20°C. 24/04/2024: Overcast clearing to sunny, very windy, 22°C. 29/04/2024: Overcast clearing to sunny, windy, 19°C.
Site slope and drainage features	The site buildings are situated almost entirely in the western half of the site. There is a ridge running north-south through the site, approximately 50m east of the western site boundary. The ridge slopes gently down in a northerly direction with a gentle slope down to the west and a steep slope down to the east to the site boundaries. The low-lying area directly to the east of the site comprises an artificial drainage system (ephemeral drainage line), acting as a catchment for the surrounding area to the south. The system feeds into a culvert draining north underneath Gillieston Road.

DETAILED SITE INVESTIGATION

Site Details

Item	Information
Nearby surface water bodies	There is a chain of dams to the north, east and west of the site, with the largest to the north-west. These dams are linked by ephemeral creek lines that lead to the north away from the site, eventually linking into Swamp Creek to the north of the site.
Site surface coverings	The eastern portion of the site was covered in grass. The western half was covered with a combination of grass, sporadic weeds, mature trees and garden beds. Concrete hardstands were observed surrounding school buildings and appeared to be in good condition with minor discolouring and cracking evident. There is an area of mulch/ woodchips between some central buildings. Maintained, healthy grass surrounded most school buildings. Minor areas of exposed soil were found around the centre and north of the site.
Surface soils	Surface soils, where observed, were brown-grey silty sands that were consistent across the site. Surface soil was relatively shallow except in the low-lying eastern areas.
Site cut and fill	No notable anthropogenic material was observed in soils across the site. Minor filling was observed in close proximity to the buildings in the western portion of the site. Filling in this area appeared to comprise site-won materials and is likely associated with site-levelling practices.
Buildings and structures	Two buildings of aged construction are present on the site, one in the north-western corner (Building D) and one just to the south of the centre of the site (Building A). Original buildings were of brick and weatherboard construction and were in relatively good condition, however, some paint flaking observed. Other buildings were temporary demountable buildings on light concrete block footings raised 1-2m above ground level. Above ground water tanks were observed and one underground storage tank was noted, confirmed to be sewer storage.
Potential asbestos in building materials	No detailed hazardous material survey was conducted by Stantec, however, it has been established that soil impacts surrounding Building D (as shown on **Figure 2, Figure 3, Appendix A**) are likely attributable to weathering and historical destruction of hazardous building materials. The schools asbestos register identifies asbestos in Building A and D, and indicates the potential for asbestos material in other buildings on site.
Manufacturing, industrial, or chemical processes and infrastructure	Not observed.
Fuel storage tanks (USTs/ASTs)	Not observed. Underground tank noted above is a sewer storage structure.
Dangerous goods	Not observed.
Solid waste deposition	The housekeeping of waste and facilities was acceptable. Multiple 240L yellow-lid recycling bins and one general waste skip bin (approximately $5m^3$ volume) were observed in the south-western area of the site, used for management of waste and recyclable materials generated from school operations.
Liquid waste disposal features	Not observed. A canteen was observed on site where liquid waste such as cooking oil may be generated, however, Stantec are unable to comment the potential wastes and management systems related to the canteen.

Item	Information
Evidence of previous site contamination investigations	Not observed, however, Stantec note the prior site investigations that have occurred.
Evidence of land contamination (staining or odours)	Not observed.
Evidence of groundwater contamination	Not observed.
Groundwater use	Not observed.
Vegetation	Well-maintained grass school grounds. Mature trees were found across the western half of the site with some smaller shrubs and vegetated garden beds. No signs of stressed vegetation were observed at the site.
Services	Not observed.
Site fencing	The site is bound by 1.8m high steel security fencing, with temporary construction fencing evident on the southern boundary of the site, parallel to Northview St. Pedestrian access to the site is from the south off Northview Street, car parking access is from the north off Gillieston Road, and there is a locked vehicle access gate from the south off Northview Street (just east of the pedestrian access point).

4.0 SITE HISTORY

A detailed site history review was undertaken as part of the PDSIC (Stantec, 2023c) which utilised publicly available and searchable registers and data sets to identify land uses and other information that may identify onsite or offsite sources of contamination. A summary of site history information is provided in the subsections below.

4.1 PREVIOUS INVESTIGATIONS

The following previous reports were reviewed as part of this assessment:

- Stantec Australia Pty Ltd (2023b), *Targeted Soil Investigation – Initial Advice – Contamination,* Prepared for School Infrastructure NSW, Issued 8 February 2023.
- Stantec Australia Pty Ltd (2023d), *Preliminary Desktop Site Investigation – Contamination, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 10 March 2023.
- Stantec Australia Pty Ltd (2023e), *Remediation Action Plan, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 21 March 2023.

Stantec is aware of the following reports that are summarised in detail within the PDSIC (Stantec, 2023b):

- Stantec Australia Pty Ltd (2023a), *Geotechnical DD – Preliminary Desktop Review, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 8 February 2023.
- Stantec Australia Pty Ltd (2023c), *Intrusive Geotechnical Report, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 10 February 2023.

A summary of previous reports and works associated with contamination for the site are summarised in **Table 4-1** below:

Table 4-1 Previous Report

Item	Description
Stantec, Targeted Soil Investigation – Initial Advice – Contamination, 8th February 2023	
Objectives	The objective of this investigation was to provide more complete and definitive information on issues raised during the completion of PDSIC. The objective of this document is to alert School Infrastructure NSW as soon as possible with initial advice. It is noted that this document does not include all elements of reporting as required.
Background and scope of works	On 19, 20 and 21 December 2022, a total of 28 boreholes were drilled at the site for geotechnical purposes. Of these boreholes, a total of 32 soil samples were opportunistically analysed for a broad suite of chemical analytes associated with the findings of the PSI (Stantec 2023). The results were compared against relevant assessment criteria as detailed in the SAQP (Stantec 2023a) and exceeded lead and zinc concentrations were reported above the assessment criteria. Stantec conducted hand augured environmental boreholes and soil sampling to a depth of 0.3 m Below Ground Level (mBGL) at 16 locations.

DETAILED SITE INVESTIGATION

Site History

Item	Description
Results	• Lead was found exceeding the adopted human health criteria in seven (7) locations. • Zinc was found to exceed the adopted Urban residential and open space Ecological Investigation Level criteria (220mg/kg) in 6 locations.
Conclusions and Recommendations	The additional targeted site investigation has made the following conclusions: • Soils within at least the upper 0.0-0.1mBGL in the northwest quadrant of the site are contaminated above human health (lead) and ecological criteria (zinc) from a statistical perspective. The exact lateral and vertical extent are not known at this stage but the current data has informed this area. • The likely source of this contamination is weathering of these metals from the exterior surface of Building D, however, Stantec has not made any investigation of the building materials to confirm this. Stantec were made aware of lead paint dust removals in December 2021, however, have not been provided with this report. • The vertical depth of this contamination is not known as deeper samples were collected but not yet analysed at the laboratory. • The bioavailability of the lead and zinc are not known but may play an important role in the toxicity and exposure risk of each to humans at the site. The following recommendations are made: • Until such time that further investigations, risk assessment and/or site remediation coupled with a long-term environmental management plan is completed the following actions to be implemented: – A ground covering, secured to the ground so as not to move or cause a tripping hazard, should be applied to landscaped or soil exposed areas within the extent shown on Figure 2 to minimise dust releases or run-off from the contaminated area as an interim measure. • Sediment interception should be installed at the stormwater basin in the car park. • General cleaning of external hardstand areas, that will not be covered, should be undertaken to remove existing dusts using dry methods or wet vacuuming by a specialist lead (Pb) removalist contractor. • Further soil investigation of the areas designated in Figure 2 should be conducted to confirm the extent of lead and zinc. • If existing soil samples are available at the laboratory, analysing of deeper depth samples should be undertaken as any potential remediation will require information about vertical extent of contamination. • Consideration should be made to conducting bioavailability analyses of new soil samples. The number of samples will be based on the needs of a risk assessment for the site.
Stantec, Preliminary Desktop Site Investigation – Contamination, 10th March 2023	
Objectives	Stantec completed a Preliminary Desktop Site Investigation – Contamination (PDSIC) to preliminarily assess the suitability of the land for the proposed land use(s). The primary objectives of this investigation were therefore to preliminarily evaluate the potential for site contamination to be present based on the historical land use, desktop searches and an intrusive investigation.
Scope of works	A Preliminary Contamination Assessment with Limited Sampling • Desktop study site history review. • Site walkover. • Environmental sampling in conjunction with geotechnical investigation, including 28 boreholes to a maximum depth of 1.8m BGL with soil sampling every 0.5m. • Quality assurance and quality control sampling and analysis at a NATA accredited laboratory.

DETAILED SITE INVESTIGATION

Site History

Item	Description
	• Recording of site observations for visual aesthetics and olfactory indicators of potential contamination. • Preparation of a Preliminary Desktop Site Investigation – Contamination (PDSIC) Report. • Preparation of a supplementary data gap investigation based on preliminary soil investigation findings. Data Gap Investigations • Additional extensive site walkover to instigate potential sources of contamination and areas of potential environmental concern. • Environmental sampling including fifty-one (51) hand augers advanced to a maximum depth of 0.3m BGL. • Recording of site observations for visual aesthetics and olfactory indicators of potential contamination. Preparation of a PDSIC report in general accordance with the *Consultants Reporting on Contaminated Land* (NSW EPS, 2020) and the *National Environmental Protection (Assessment of Contamination) Measure* (1999).
Results	Soil Observations • A consistent fill material was identified across the site to a maximum depth of 1.2mBGL at BH27. It is noted that the average depth of fill across site was 0.59 m BGL based on the 28 boreholes that penetrated into the natural stratum. • Anthropogenic material (soft plastics, plastic tape, PVC pipe fragments, metal, nails, tile, brick, concrete, glass) was observed in trace quantities in fill material in HA104, HA201, HA202, HA204, HA306, HA309, HA310, HA316, HA317, HA324, HA325, HA326, HA328, HA329 and HA331. • No visual or olfactory evidence of contamination was observed. • Indicators of acid sulfate soils and salinity were not observed. • Groundwater was not observed during drilling of any sample locations. Human Health • Twelve (12) sample locations exceeded the HIL screening criteria for lead (BH14, BH15, HA102, HA103, HA104, HA108, HA109, HA111, HA112, HA309, HA311 and HA331). • A single bonded asbestos containing material (ACM) fragment within surficial fill materials at sample location HA331 was observed, furthermore, friable asbestos (in the form of asbestos fines (AF) and fibrous asbestos (FA)) was detected in in soil of 0.055%w/w at the same location when WA/NEPM quantification analysis was completed at a NATA accredited laboratory. Ecological • Exceedances of EIL criteria included the following: - Two (2) sample locations for lead (HA103 and HA331). - Fifteen (15) sample locations for zinc (BH14, BH15, HA102, HA103, HA104, HA108, HA111, HA116, HA309, HA310, HA317, HA319, HA321, HA330 and HA331). - One (1) sample location for nickel (BH15) Aesthetic • Anthropogenic material in trace quantities in fill material was observed at 15 locations. • With the exception of asbestos / ACM, the type, quantity and nature of anthropogenic material found in fill across the majority of the site was determined not to pose a risk to human health or be likely to cause visual concern if they were reused on site. Groundwater

DETAILED SITE INVESTIGATION

Site History

Item	Description
	• It is anticipated that groundwater will be associated with seepage flows along the interface of the residual clay and bedrock and also minor seepage through fractures and joints in the rock above the permanent regional groundwater table. Considering the proposed earthwork will be limited to general levelling only, it is anticipated the proposed activity earthwork will not intersect with the groundwater table.
Conclusions	Upon completion of the scope of works outlined above, the following was concluded; • Gillieston Public is proposed for land use as pre-kindy and K-6 school. While development plans are still being finalised, this investigation was undertaken to preliminarily identify potential contamination and aid in determining suitability of the site. • Based on the desktop review of available documentation, the documented site history and land use of the Gillieston Public site and immediate surrounding appeared to have been used for educational purposes by ownership since at least 1898. The use of the site for educational purposes has continued to date. The site has undergone progressive development throughout the studied history, with the staged construction of current school infrastructure, noting that many of the current school buildings are temporary demountable buildings rather than permanent buildings, the most recent of which was added in late 2022. The surrounding land for the most part has not gone through significant changes and modifications during the assessed history, except for the south-east which has been developed with residences. • Specific activities of relevance to potential contamination that appear to have occurred on site include demolition and filling. • The site was not subject to regulation by the NSW EPA and was found to be free of statutory notices and licencing agreements under both the CLM Act 1997 and PoEO Act 1997 and was not included on the List of NSW Contaminated Site. • Based on review of supplied asbestos building materials register asbestos has been identified in external features in Buildings A and D. Potential exists for further unidentified asbestos in soil in proximity with these structures associated with historical demolition work and poor construction and maintenance practices. Based on the above conclusions, the following was recommended: • Develop a Remediation Action Plan (RAP) and / or develop a site-specific Human Health and Ecological Risk Assessment (HHERA); • Develop an Unexpected Finds Protocol to manage risks of unidentified impacts such as hazardous materials or waste in fill material at the site. • Prepare a Construction and Environmental Management Plan (CEMP) to minimise potential risks to human health and the environment during implementation of the RAP; • The preparation of waste classification assessments (as required) for disposal of impacted soil. It is recommended that stockpiling and assessment of each area or spoil type to confirm the final classification due to the heterogeneity in the fill material. • Any material being removed from site (including virgin excavated natural materials or VENM) must be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or a NSW EPA Resource Recovery Order. • Based on the findings of this assessment and with reference to the proposed activity, Stantec recommends the development of: – A Remediation Action Plan (RAP) and/or Human Health and Ecological Risk Assessment (HHERA) for the site; – The preparation of waste classification assessments (as required); and – Site validation report to inform the site remediation work and future site development plans.
Stantec, Remediation Action Plan – Contamination, 21st March 2023	

DETAILED SITE INVESTIGATION

Site History

Item	Description
Objectives	Stantec was required to prepare a RAP to identify and outline methodologies to appropriately manage the bonded ACM, friable asbestos, lead and zinc contamination at the site to allow DOE to proceed with the planned site redevelopment. The objective of this RAP was to set remediation objectives and document the process to remediate the site.
Scope of works	The preparation of the RAP included the following scope of work: • Review of previously prepared site reports to review and identify: – Site features and extents; – A conceptual site model (CSM); and – What further assessment, if any, is required. • Propose and evaluate options for remediation of the identified CoPCs in impacted soil and recommend the preferred remediation strategy; • Detail the implementation of the preferred remediation strategy including: – Identifying legislative, planning and permitting requirements; – Develop a Construction and Waste Management Plan outlining environmental controls required for the duration of the remediation works including an Unexpected Finds Protocol (UFP) and contingency plan; and – Identify environmental and occupational health and safety (OHS) control measures and community consultation requirements associated with implementation of the preferred remedial strategy; • Preparation of the Remediation Action Plan document outlining the above in accordance with the (NSW EPA, 2020) Consultants reporting on contaminated land: Contaminated land guidelines.
Remediation Strategy and conclusion	The following brief remediation strategy is recommended for implementation 1. Preliminaries and Site Establishment; 2. Additional investigation in previously inaccessible areas (underneath hardstands and / or beneath existing demountable buildings and demolition of any structures) to determine additional areas requiring remediation (if required); 3. Validation of remedial excavations following the removal of contaminated materials; and 4. Reporting. Once all remediation works have been undertaken and the validation works have been completed successfully in accordance with this RAP, then the site would be considered suitable for the intended land use.
Stantec, Supervision of Remediation and Validation Works	
Objectives	Stantec was the Environmental Consultant tasked with ensuring the remediation works at the site were completed adequately and as per the RAP (Stantec, 2023d)
Scope of works	Stantec was tasked with supervising remedial excavations and collecting samples which were analysed for the contaminants of potential concern (CoPCs) (lead, nickel and asbestos). Stantec attended site on the 17, 18, 19 and 20 of April and the 3 of May 2023 to collect samples for analysis, conduct waste classifications on soil material to be removed and disposed from site as well as validate imported soil materials being brought to site.



DETAILED SITE INVESTIGATION

Site History

Item	Description
Results	• Validation samples were collected from the walls and base of remedial excavations as per Table 11-1 of the RAP (Stantec 2023d), with eighty-two (82) samples collected in total, with fourteen (14) samples reporting lead concentrations above the adopted HIL A criteria (300mg/kg): - VAL_W03 reported a concentration of 391 mg/kg. - VAL_W15 reported a concentration of 330 mg/kg. - VAL_W17 reported a concentration of 920 mg/kg. - VAL_W19 reported a concentration of 400 mg/kg. - VALC_W02 reported a concentration of 410 mg/kg. - VALC_W06 reported a concentration of 660 mg/kg. - VALC_W10 reported a concentration of 340 mg/kg. - VALC_W11 reported a concentration of 340 mg/kg. - VALN_W01 reported a concentration of 300 mg/kg. - VALN_W02 reported a concentration of 360 mg/kg. - VALN_W06 reported a concentration of 360 mg/kg. - VALN_B02 reported a concentration of 500 mg/kg, with the duplicate and triplicate samples QA500 and QA600 reporting a concentration of 550mg/kg and 360 mg/kg respectively. - VALE_B03 reported a concentration of 310 mg/kg. - VALE_B04 reported a concentration of 420 mg/kg. • The location of validation samples can be viewed in **Figure 2** and **Figure 3** of **Appendix A.** • Waste classifications as per the NSW EPA Waste Classification guidelines (NSW EPA, 2014) were conducted on three (3) stockpiles, SP1, SP2 and SP3. • Stockpiles were analysed for TRH, BTEX, PAH, metals, OCP, OPP PCB and asbestos. - SP1 was generated from material to the south of Building D and was approximately 34t. o Three (3) soil samples and two possible asbestos containing material (PACM) samples were collected from the stockpile (ACMD14417_1, ACM_D14417_2, SP01(S)_1, SP(01)(S)_2 and SP01(S)_3. o Concentrations of lead and benzo(a)pyrene were reported above the General Solid Waste (GSW) CT1 criteria, as no Toxicity Characteristic Leachate Procedure (TCLP) analysis was performed due to time constraints the stockpile was classified and disposed of as restricted Solid Waste (RSW). - SP2 was generated from material in all directions of Building D and (comprised of the majority of the material excavated as part of the remedial works. SP2 was approximately 190t. o Five (5) soil samples were collected from the stockpile (SP02-1, SP02-2, SP02-3, SP02-4 and SP02-5). o Concentrations of lead and benzo(a)pyrene were reported above the General Solid Waste (GSW) CT1 and CT2 criteria, following TCLP analysis concentrations were reported below TCLP1 criteria which indicated the soil material met the chemical requirements to be classified as GSW. o Chrysotile asbestos was detected in weathered fibrous material when conducting asbestos analysis of sample SP02-4. o The above factors indicated the stockpile was assessed and disposed of as GSW – Special Waste. - SP3 was generated from soil material located east of Building D, surrounding the area in which a bonded chrysotile asbestos fibre cement fragment was identified (HA331). SP3 was approximately 11t. o Three (3) soil samples were collected from the stockpile (SP03(S)-1, SP03(S)-2 and SP03(S)-3.

DETAILED SITE INVESTIGATION

Site History

Item	Description
	o Lead concentrations were reported above CT1 and Specific Contaminant Criteria (SCC1) criteria which indicated that the soil material was chemically classified as RSW. o Due to the previous asbestos found during sampling, the soil material was classified and disposed of as RSW – Special Waste. • Following validation sampling and waste classification of soil materials excavated during remedial works, it was considered unfeasible to remediate the remaining fourteen (14) lead exceedances due to time constraints and the location of some exceedances (underneath building footprints). - The majority of lead exceedances were deemed acceptable through statistical analysis and initial risk assessment, however, one sample (VAL-W17-0.1) reported a concentration of 920 mg/kg, which is more than 250% of the HIL A criteria for lead (300 mg/kg). As such, this is considered a hotspot requiring remediation or management and cannot be deemed an acceptable risk through statistical analysis of existing data. As this location is located against a building footprint, further excavation using an excavator is not deemed practicable. • The following options were provided to DOE (via email on the 24/04/2023): - Further excavate this area surrounding W17 with hand tools all the way to the building foundations and conduct validation sampling on the base and walls of the excavation: o Noting that lead analysis may produce a number similar or higher than the current concentration which would again require remediation or management. - Stantec further conducts a brief risk assessment and prepare a short and initial Health Risk Assessment Letter that outlines the reason why this area is not considered a risk to current site users. o This would not discredit risk to future site users and the Validation Report would recommend further management of the material. - Preparation of a Long-term Environmental Management Plan (LTEMP). o An LTEMP would detail the residual risk (current and future site users) and appropriate management strategies for the remaining lead contamination on site. • After discussions with DOE it was decided that the remedial excavations would be temporarily filled, and the remaining unacceptable lead exceedances would be addressed during the planned bulk earthworks as part of the proposed activity of the school. - The soil material imported to the site underwent validation before being imported. - The soil material was imported from Australian Native Landscapes and consisted of a mixture of topsoil, mulch and sand. - The soil material was considered suitable for importation following analysis by a previous consultant and verification that the material met the current land use criteria through analysis by Stantec. • The Validation Report could not be finalised due to at least one remaining hotspot location at the site.

5.0 PRELIMINARY CONCEPTUAL SITE MODEL

Outlined within the National Environment Protection Measure (NEPM) 2013 Schedule B2 – Guideline on Site Characterisation, a Conceptual Site Model is (CSM) required to aid the assessment of data collected for the site.

5.1 PRELIMINARY CSM

A CSM provides an assessment of the fate and transport of contaminants of potential concern within the context of site-specific subsurface conditions regarding their potential risk to human health and the environment. Potential risk to human health and the environment is identified through complete Source – Pathway – Receptor (SPR) linkages. To identify SPR linkages, the CSM considers site specific factors including:

- Source(s) of contamination.
- Identification of contaminants of concern associated with past (and present) source(s).
- Site specific information including soil type(s), depth to groundwater, effective porosity, groundwater flow velocity and surface water bodies and interactions.
- Locations of any identified sources relative to the proposed site activity.
- Actual or potential receptors considering both current and future land use both for the site, adjacent properties, and any identified sensitive ecological receptors.

5.1.1 Identified contamination sources

Based on review of the historical reports, site history and surrounding land uses, Stantec have identified the following sources of contamination that may be encountered onsite:

- Lead, zinc and asbestos impacted soil in the northwestern and southern portions (weathering of hazardous building materials).
- Potential filling impacted by contaminants located within previously unassessed areas.

5.1.2 Identified Receptors

A high-level summary of potential receptors considered to be susceptible to site contamination include:

- Students;
- Teachers and school staff including groundskeepers and contractors;
- Construction workers (proposed activity);
- Future staff post-development, including teachers, groundskeepers and contractors;
- Adjacent site users; and
- Ecological receptors such as mature trees, waterbodies and shallow groundwater. In the absence of waterways or obvious areas of ecological significance no other receptors have been identified.

Preliminary Conceptual Site Model

The preliminary CSM applicable to the site is summarised in **Table 5-1** and applies to the potential future land use settings.

Table 5-1 Preliminary Conceptual Site Model

Contaminant Source	Impacted Media	Contaminants of Potential Concern	Potential Exposure Pathways	Receptors	Likelihood of Completeness
Hazardous building materials contained within former and existing site structures Weathering of exposed building structures	Air Surficial Soils	Lead Zinc Asbestos	Direct Contact Incidental Inhalation (dust and fibres) Incidental Ingestion (dust and fibres)	**Human:** Current and future site users Future Site workers (including maintenance workers) Neighbouring site users **Ecological:** Existing and future plant-based biota within the site	**Medium to high:** if the impacted soils extend beyond the previously identified areas, a medium to high likelihood of exposure by receptors exists.
Potential filling within previously unassessed areas	Soil Surface water through run-off	Metals TRH PAH BTEX OCP OPP PCB PFAS Asbestos	Direct contact Incidental ingestion Incidental inhalation dust and/or fibres (asbestos) Vapour intrusion (volatiles only)	**Human:** Current site users Future Site workers (including maintenance workers) Neighbouring site users **Ecological:** Existing and future plant-based biota within the site	**Low**: previous investigations suggest the site is comprised with fill layers varying between 0.3m – 1.2m bgl thickness. Although no contamination above applicable land use criteria has been identified outside of the area undergoing remediation in the northwest of the site, there is potential for contaminants to exist within fill layers and the potential for receptors be exposed during the future activity work.



6.0 DATA QUALITY OBJECTIVES

6.1 DATA QUALITY OBJECTIVES

The NSW EPA (2017) Guidelines for the NSW Site Auditor Scheme (3rd Edition), the NEPM (NEPC, 2013), and the NSW EPA (2020) Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, which are made or approved by the NSW EPA under s105 of the Contaminated Land Management Act 1997 requires that Data Quality Objectives (DQOs) be identified for all assessment and remediation programs. The DQO process as adopted by the NSW EPA is described within the NSW EPA (2022a) Contaminated land guidelines: Sampling design part 1 – Application. The DQOs for the assessment are summarised below in **Table 6-1**.

Table 6-1 Data Quality Objectives

DQO Step	Discussion
Step 1: State the Problem **(Summarise the contamination problem that will require new environmental data and identify the resources available to resolve the problem; develop a conceptual site model).**	Information gathered through the review of previous reports has indicated that contamination has the potential to exist on site, resultant from the potential contaminant sources listed in the preliminary CSM in **Section 5.0.** The proposed site activity as per the description provided in **Section 1.2** and an investigation is required to assess if contamination is present within the site at concentrations that would constrain activity of the site or render the site unsuitable, considerate of the identified human and ecological receptors.
Step 2: Identify the decision / goal of the study **(Identify the decisions that need to be made on the contamination problem and the new environmental data required to make them).**	Our default assumption (null hypothesis) for the purpose of the study is that: • The site is impacted by contamination at a level that would impact the suitability of the proposed activity due to prior activities and potential contaminant sources listed in the Preliminary CSM. We aim to show, that: • The site areas planned for redevelopment are not impacted by contamination at a level that represents a risk to current and / or future onsite and offsite receptors, excepted the areas currently under remediation based on previous investigations. If this can be shown then, subject to the limitations of the investigation methodology, the site will be determined not impacted by contamination that present a risk to current, ongoing and future land uses, or that will not constrain the proposed future activity. If this cannot be shown, then the following decisions will be made: • Is further investigation required; and / or • Is remediation necessary to make the site suitable for the intended land use?
Step 3: Identify the information inputs **(Identify the information needed to support any**	Inputs to the decision-making process included: • The primary inputs to the decisions described above are: • Guidelines made or approved by the NSW EPA under the Contaminated Land Management Act 1997;

DQO Step	Discussion
decision and specify which inputs require new environmental measurements).	• Information (including site history) or results from previous investigations completed at the site; • Information gathered during the previous and current investigation of both site fill and natural soils as well as sediment and surface water; • Information obtained through investigation of data gaps; • Aesthetic observations of soils, including odours, staining and waste inclusions; and • Laboratory analysis of soils, surface water and sediment for relevant COPCs, based on historical land use and previous investigations. • Assessment of the suitability of the analytical data obtained, against the Data Quality Indicators (DQIs) is outlined below.
Step 4: Define the boundaries of the study **(Specify the spatial and temporal aspects of the environmental media that the data must represent to support decision)**	The boundaries of the study are: • Lateral – the intrusive investigation is limited to the sampling points as shown in **Appendix A**. • Vertical – the intrusive environmental investigation was limited to a maximum extent of 2.3 bgl (TP5). • Temporal – Results are valid on the day of data / sample collection and remain valid as long as no changes occur on site or contamination (if present) does not migrate on site or on to the site from offsite sources.
Step 5: Develop the analytical approach. **(To define the parameter of interest, specify the action level, and integrate previous DQO outputs into a single statement that describes a logical basis for choosing from alternative actions).**	Parameters of interest include the laboratory results of primary and quality control soil and groundwater analytical testing. The CSM must also be considered sufficient and not limited by data gaps that bring question to the quality of the results. Data will be considered suitable for use where: ▪ The laboratories are NATA-accredited and quality assurance/ quality control data are within the acceptable ranges, nominated in **Table 5-2.** Where data does not meet suitability criteria the following approaches will be considered: ▪ Data may be considered unsuitable and not used for the site assessment (i.e. where blanks indicate cross-contamination); or ▪ Data may be adopted with qualification (i.e. heterogenous distribution of metals within replicate samples). ▪ Further sampling may be necessary to close data gaps resulting from unsuitable data. Soil and sediment results will be considered less than (i.e. not exceeding) the adopted site criteria nominated in **Section 6.1** and **Section 7.2** if: ▪ Soil materials are aesthetically suitable for the proposed land-use; and The laboratory reported results are less than the relevant adopted criteria; or ▪ For a representative group of samples (i.e. from the same strata and area within the site): – The calculated 95% Upper Confidence Level of the arithmetic mean (95%UCL) contaminant concentration is less than criteria; and

DQO Step	Discussion
	– The standard deviation of the results is less than 50% of the relevant adopted criteria; and, – No single analytical result for a contaminant of concern exceeds 250% of the relevant adopted criteria. Surface water results will be considered less than adopted site criteria nominated in **Section 7.3** if: • The laboratory reported result is less than the relevant adopted criteria. • If results are greater than the adopted criteria then they will be considered to indicate contamination of land and will trigger a decision on further assessment or remediation; otherwise if no results are greater than the adopted criteria then the material will be considered suitable for the intended land-use.
Step 6: Specify performance or acceptance criteria **(Specify the decision-maker's acceptable limits on decision errors, which are used to establish performance goals for limiting uncertainties in the data).**	Two primary decision error-types may occur due to uncertainties or limitations in the project dataset: • A sample/ area may be deemed to pass the nominated criteria, when in fact it does not. This may occur if contamination is missed due to limitations in the sampling plan, or if the project analytical data set is unreliable; • A sample /area may be deemed to fail the nominated criteria, when in fact it does not. This may occur if the project analytical dataset is unreliable due to inappropriate sampling, sample handling or analytical procedures. The following aspects were considered when establishing the acceptable limits on decision errors: • The null hypothesis for the project is: the sample/investigation area is deemed to be contaminated. Sufficient weight of evidence, via the uses of statistical analysis (e.g. 95% upper confidence limit of the mean [UCL]) and/ or gathering multiple lines of evidence (e.g. desktop review and laboratory analytical data), would be required to reject/ disapprove the null hypothesis; • A quality assurance/quality control (QA/QC) assessment evaluating the reliability and useability of data, which are expressed as five DQIs summarised in **Table 6-2**.
Step 7: Develop the plan for obtaining data **(Identify the most resource-effective sampling and analysis design for general data that are expected to satisfy the DQOs).**	The works plan is designed to meet the project objectives in **Section 1.3** and the DQOs outlined above. To ensure resource-effective sampling, analysis and data collection that satisfied the DQOs, the following actions are to be taken: • Written instructions will be used to guide field personnel in the required fieldwork activities. • Representative samples will be collected from the site and analysed for characterisation purposes. • Field works and analyses will be undertaken in accordance with Stantec Standard Operating Procedures. Further detail on the investigation methodology is provided in **Section 8.0** below.

6.2 DATA QUALITY INDICATORS

To ensure that the investigation results were of an acceptable quality, the data set was assessed against the data quality indicators (DQIs) outlined in **Table 6-2**.

Table 6-2 Data Quality Indicators

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
Precision: A quantitative measure of the variability (or reproducibility) of data.	• SOPs are appropriate and complied with. • Field duplicates and Blind field duplicates are collected and analysed at a rate of 5% (1 per 20 samples). • Use of calibrated equipment.	• Laboratory analyses of laboratory and inter-laboratory duplicates, field duplicates, laboratory prepared volatile trip spiles. • Relative Percent Difference (RPD) calculation results: • <30% Relative Percentage Difference (RPD). • The RPD values are calculated using the following equation: $RPD = \frac{I C_O - C_R I}{[(C_O + C_R) / 2]} \times 100$ Where, C_O = Analyte concentration of the original sample C_R = Analyte concertation of the duplicate sample
Accuracy: A quantitative measure of the closeness of reported data to the "true" value.	• SOPs are appropriate and complied with. • Use of calibrated equipment. • Field inter/intra laboratory duplicates sampled and analysed at a rate of 1 per 20 samples. • <30% Relative Percentage Difference (RPD) • Analysis of rinsate sample collected at rate of 1 per sample dispatch. • Trip spike and trip blanks were used.	• Laboratory holds NATA-accreditation for the analyses. • Laboratory limit of reporting is below the adopted investigation level. • Laboratory analysis of field blanks, rinsate blank, reagent blank, method blank, matrix spike, matrix spike duplicate, surrogate spike, reference material, laboratory control sample, laboratory-prepared spikes. The nominal acceptance limits on laboratory control samples are: • Laboratory spikes: o 70-130% recovery for metals o 60-140% for organics – Laboratory duplicates. If contaminant concentration is: o < 10 x PQL, no RPD limit o 10-20 x PQL, RPD is 0% to 50% o >20 x PQL, RPD is 0% to 20%

Data Quality Objectives

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
		– Laboratory surrogates: 60-140% recovery. – Laboratory blanks: <PQL – Laboratory control samples, 70-130% recovery
Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on site and the conditions encountered in the field	• Appropriate media sampled. • Preservation and storage of samples upon collection and during transport to the laboratory occurs. • Sampling is undertaken by an experienced sampler.	• Blank samples run in parallel with field samples to confirm there are no unacceptable instances of laboratory artefacts. • Review of RPD values for field and laboratory duplicates to provide an indication that the samples are generally homogeneous, with no unacceptable instances of significant sample matrix heterogeneities. • The appropriateness of collection methodologies, handling, storage and preservation techniques will be assessed to ensure/confirm there was minimal opportunity for sample interference or degradation (i.e., volatile loss during transport due to incorrect preservation / transport methods). • Rinsate samples used when sampling equipment is reused have analytical results <LOR.
Completeness: A measure of the amount of useable data from the data collected during the fieldwork program	• All critical locations sampled. • All samples collected (from grid and at depth). • Standard operating practices (SOPs) appropriate and complied with. • Sampling is undertaken by an experienced sampler. • Suitable records of field work are documented. • Completed laboratory sample chain-of-custody and documentation.	• All critical samples are analysed in consideration of the SAQP and Stantec's approved proposal containing a more refined sampling and analytical strategy than that specified in the SAQP. • All CoPC are analysed. • Appropriate methods and PQLs are implemented. • Sample documentation is complete. • Samples are analysed within holding times.
Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	• Same SOP is used on each field occasion. • Climatic conditions are documented. • Experienced sampler	• Sample analytical methods used (including clean-up). • Sample PQLs (justify/quantify if different). • Same laboratories are used, and justification is given where differences occur.

Data Quality Objectives

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
	• Sample type, preservation and handling are consistent at sampling events. • Use of calibrated equipment.	• Same analytical methods, PQLs, and units of measurement are used.

7.0 ASSESSMENT CRITERIA

The assessment of soils, sediment and surface water has been undertaken with the framework of a Tier 1 risk assessment. A Tier 1 assessment is a risk-based analysis comparing site data with generic investigation levels and screening levels for various land uses to determine the need for further assessment or development of an appropriate management strategy. The application of investigation and screening levels is subject to a range of limitations.

The following sections detail the Tier 1 Screening Criteria that have been adopted for the site.

7.1 SOIL ASSESSMENT CRITERIA

The soil assessment criteria have been adopted from guidelines made or approved by NSW EPA under the Contaminated Land Management Act 1997 (CLM Act) for human health and ecological exposure settings for the site. The adopted criteria are provided in the data summary tables in **Appendix E**, and the laboratory certificates are provided in **Appendix F**.

The human health and ecological assessment criteria were adopted from NEPC (2013) and PFAS NEMP 2.0 (2020) to consider the potential risk to future on-site receptors under the following land use scenarios that apply to the site:

- Human: Low-density residential (with access to soil), considered appropriate for the current and future site setting post-development.
- Ecological: Urban residential / public open space.

7.1.1 Human health criteria

Table 7-1 Human health soil assessment criteria

Guidelines	Specific Criteria	Justification
NEPC 2013, Schedule B1, Schedule B1, Section 6, Tables 1A(1) and 1A(3); For asbestos: Section 4, Table 7.	HIL-A	Health Investigation Level (HIL) A thresholds have been adopted to assess the risk to site users from soil contamination. These criteria are applicable to a low-density residential setting with accessible soils. As the actovoty includes school facilities, the HIL-A exposure scenario (residential with garden/accessible soil) is considered appropriate given the sensitive land use leading to potential exposure to soil and dust and vapours. • HIL for 'residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also includes children's day care centres, preschools and primary schools' (**HIL-A**)
	HSL-A	Health Screening Level (HSL) A thresholds have been adopted to assess vapour intrusion and inhalation in a sand / coarse grained

Guidelines	Specific Criteria	Justification
		geological setting. This has been adopted as the most conservative scenario for vapour intrusion.
	Asbestos	The following criteria have been applied to the assessment of asbestos: • No visible asbestos within surface soils (0.0-0.1 mBGL). • 0.001% w/w for friable asbestos in soil, applicable to all land uses. • 0.01% w/w for bonded asbestos in soil, applicable to a low-density residential setting.
	Aesthetic Criteria	In order to assess aesthetic suitability of site soils, the following will be considered: • Whether chemical discolouration or large quantities of inert foreign materials may cause concern to future site users; • The depth of aesthetically unsuitable materials in relation to final site surface or soil use depths (i.e. for gardens and plantings) • The need for, and practicality of, any long-term management of aesthetically unsuitable materials.
CRC CARE 2011	HSL-A	Health Screening Level (HSL) A thresholds have been adopted to assess for risk from direct contact with TRH impacted soils and are protective of current and future site users in the event of contact with gross hydrocarbon impacted soils. Land-use scenarios are equivalent to those within the NEPM.
NEMP 2.0 (2020)	Soil: HIL-A Table 2	Due to the potential presence of PFAS, the following guideline values for human health guideline values which have been derived from the ASC NEPM for HIL-A • Sum of PFOS and PFHxS (HIL-A: 0.01 mg/kg). • PFOA (HIL-A: 0.1 mg/kg).

7.1.2 Ecological criteria

The soil assessment criteria adopted to assess the potential risk to ecological receptors are outlined below in **Table 7-2**, along with the justification for their selection.

Table 7-2 Ecological soil assessment criteria

Guidelines	Specific Criteria	Justification
NEPC 2013, Schedule B1	EIL	Site-specific ecological investigation levels (EILs) will be derived by determining the physiochemical properties of shallow (maximum of 2 m) site natural soils. Samples will be collected across the site from each unique material type/soil domain and undergo laboratory analysis for pH, CEC and clay content (%), which will be input into the NEPM Worksheet Toolbox spreadsheet to derive material-specific EILs. The site-specific parameters utilised to calculate the EILs utilised for this assessment are below in **Table** 7-3.
	ESL	The generic Ecological Screening Levels (ESL) thresholds for urban residential and public open space, coarse grained soils, based on the current and proposed school use will be adopted for natural soils.

Assessment Criteria

Guidelines	Specific Criteria	Justification
NEMP 2.0 (2020)	Interim ecological guideline values	The interim ecological soil guideline values consider direct exposure (i.e. close contact with soil) and indirect exposure (i.e. exposure through the food chain). The interim guideline values apply to all land uses. Ecological Direct exposure values: • PFOS = 1 mg/kg • PFOA = 10 mg/kg Ecological Indirect exposure values: • PFOS = 0.01 mg/kg

Table 7-3 EIL Criteria

Sample ID	Matrix description	Parameters				Criteria – Aged			
		pH	CEC	Clay (%)	TOC (%)	Copper	Chromium	Nickel	Zinc
TP1_0.1	Sandy to gravelly SILT	4.9	6.1	<2.5	3	100	260	55	220
TP13_0.5	Clayey to gravelly SAND	4.5	1.1	<2.5	0.3	35	260	6	110

7.2 SEDIMENT ASSESSMENT CRITERIA

The sediment assessment criteria has been adopted from the Toxicant Default Guideline Values for sediment quality published in the Australia and New Zealand Guidelines for Fresh & Marine Water Quality 2018 (ANZG, 2018), and are summarised in **Sediments will** also be screened against the human health and ecological soil assessment criteria discussed in **Section 7.1** above.

Table 7-4 below, along with the rationale behind the adopted criteria. Where no applicable criteria exists for a contaminant within the sediment guidelines, a relevant criteria from the above-described soil screening criteria were adopted.

Sediments will also be screened against the human health and ecological soil assessment criteria discussed in **Section 7.1** above.

Table 7-4 Sediment assessment criteria

Guidelines	Specific Criteria	Justification
ANZG (2018)	Default Guideline Values (DGV)	The sediment toxicant DGVs will be adopted as baseline criteria for aquatic ecosystems. Where contaminants are below the DGV there is a low risk of unacceptable effects occurring.
	GV-High	GV-high will be used as an indicator to assess whether contamination of sediments indicates potential high-level toxicity problems.

7.3 SURFACE WATER ASSESSMENT CRITERIA

The environmental quality of surface water has been assessed against relevant environmental values that are applicable to the type of water use and potential human health and ecological exposures that could occur from its use.

The water quality analytical results are compared to guidelines made or approved under s105 of the CLM Act 1997 by NSW EPA and through the NSW Water Quality Objectives.

The applicable environmental values and surface water assessment criteria are outlined in

Table 7-6 below, whereas the rationale for the criteria is provided in **Section 7.3.1.**

7.3.1 Rationale for Surface Water Assessment Criteria

The NSW Government adopted the National Water Quality Management Strategy (NWQMS) as its policy to manage the quality of waterways in New South Wales and protect water resources (NSW DPIE, Protecting and managing water quality, https://www.environment.nsw.gov.au/topics/water/water-quality/protecting-and-managing-water-quality).

The NSW Water Quality Objectives include default trigger values for toxicants, physical, and biological stressor for each catchment. Toxicant default guideline values (DGVs) are outlined in Australian and New Zealand Guidelines for Fresh and Marine Water Quality (Water Quality Guidelines, ANZG 2018) while physical and biological stressors, and relevant environmental values are provided at NSW Water Quality and River Flow Objectives (https://www.environment.nsw.gov.au/ieo/index.htm).

In accordance with the NSW Water Quality Objectives and the *Guidelines for the Assessment and Management of Groundwater Contamination* (Ref. DEC, 2007), groundwater, including surface water, acceptance criteria are based on environmental values considered relevant for the water use at the site and surrounding uses of surface waters that may be affected by the site. Environmental values are as explained below **Table 7-5**.

Table 7-5 Assessment of Surface Water Environmental Values

Environmental Value	Applicable	Rationale/ Comment
Protection of aquatic ecosystems	Yes	There is one dam/ drainage line located at the eastern extent of the site. The potential receiving water bodies for the site are private dams/ ponds to the north/ northwest of the site, with these dams assumed to discharge into Swamp Creek to the northeast or northwest approximately 800 m from the site. Both are freshwater environments. Protection of freshwater aquatic ecosystems is considered an applicable environmental value.

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Assessment Criteria

Environmental Value	Applicable	Rationale/ Comment
Drinking water	No	The surface water (dam) is not used by humans as a potable water supply. A bore search did not identify domestic bores within 1km of the site. As such, this environmental value is not considered to be directly relevant.
Irrigation	Yes	On-site use of the dam for irrigation purposes is unknown. In the event that the site dam is 35ubsurfa for dust suppression or irrigation, this environmental value has conservatively been considered applicable as a preliminary screening value.
Stock Watering	No	On-site use of surface water for stock watering purposes is not currently practiced. A bore search did not identify domestic bores within 500m of the site. This environmental value is not considered relevant.
Industrial Use	No	Use of surface water for industrial purposes is not currently undertaken. Specific industrial processes would require separate assessment and is not considered further in this report.
Aquaculture and human consumption of aquatic foods	No	A review of the NSW Department of Primary Industries NSW Aquaculture Industry Directory 2019 did not list an aquaculture producer on or in close proximity to the site. This environmental value is not considered relevant.
Primary and Secondary Contact Recreational Use	No	There is minimal possibility that wholebody primary or incidental secondary contact to surface water occurs either for school children or workers during construction. Definitions of water contact are as follows: • Wholebody contact (primary contact) — activity in which the whole body or the face and trunk are frequently immersed or the face is frequently wet by spray, and where it is likely that some water will be swallowed or inhaled, or come into contact with ears, nasal passages, mucous membranes or cuts in the skin (e.g. swimming, diving, surfing or whitewater canoeing). • Incidental contact (secondary contact) — activity in which only the limbs are regularly wet and in which greater contact (including swallowing water) is unusual (e.g. boating, fishing, wading), and including occasional and inadvertent immersion through slipping or being swept into the water by a wave. • No contact (aesthetic uses) — activity in which there is normally no contact with water (e.g. angling from shore), or where water is incidental to the activity (such as sunbathing on a beach). The waterbody is considered aesthetic in nature with no clear usage for recreation. As such, this environmental value is not considered applicable.
Non-use scenarios (i.e. vapour	Yes	Groundwater health screening levels for vapour intrusion (HSLs) are published in the NEPC 2013, Schedule B1 for selected petroleum compounds

Environmental Value	Applicable	Rationale/ Comment
inhalation and intrusion)		and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. Workers and future users/occupiers of the land may be exposed to vapours emanating from contaminated surface water if present. This environmental value should be assessed.
Buildings and Structures	Yes	Surface waters may come in contact with buildings and infrastructure. Corrosive waters may be a cause of concern for infrastructure and so this environmental value should be assessed.
Visual amenity and aesthetics	Yes	Surface waters with aesthetic or visual amenity issues may occur within site waterbodies and as such should be assessed.

Table 7-6 Surface Water Assessment Criteria

Assessed Value	Guideline or Standard	Criteria
Protection of aquatic Ecosystem	ANZG 2018 & NSW Water Quality and River Flow Objectives	• Freshwater, 95% level of protection, toxicant default guideline values (DGVs). Where a contaminant is bio-accumulative, the 99% level of protection criteria are adopted. • Physical and biological indicators: Default Trigger Values in NSW Water Quality and River Flow Objectives.
	For PFAS: HEPA NEMP 2020 (Ver. 2.0), Table 5	Freshwater, 95% level of protection. The 95% level of protection defaults to the 99% level of protection as PFAS are bio-accumulative.
Irrigation	ANZG 2018 & NSW Water Quality and River Flow Objectives	ANZG 2018 refers to ANZECC 2000, Volume 3, Chapter 9.2. Short-term and long-term trigger values. Irrigation criteria will be applied where applicable.
Visual amenity and aesthetics	ADWG 2022	Aesthetic assessment will be undertaken in accordance with guidance within Chapter 10.
Water in non-use scenarios (i.e. vapour inhalation and intrusion)	NEPM 2013	Groundwater – HSL A&B for vapour intrusion in residential settings.
Water impact on Buildings and Structures	Australian Standard 2159-2009 Piling-Design and Installation (AS2159)	Physiochemical parameters, where collected, will be compared against criteria

8.0 METHODOLOGY

8.1 SITE INVESTIGATION PROGRAM

Fieldwork was managed and delivered by experienced contaminated lands professionals from Stantec. Photographs taken to document the site works are provided in **Appendix D**, with geological logs presented in **Appendix G**.

The Quality Assurance / Quality Control (QA/QC) program is discussed in **Section 6.0**. Copies of NATA-accredited laboratory reports and chain of custody documentation is provided in **Appendix F**.

Table 8-1 Investigation Activity Summary

Activity	Details
Dates of Field Activity	Works were undertaken in April 2024. The specific site activities undertaken during these periods are summarised below in chronological order: • Service locating, a site walkover and soil sampling via hand-tools was undertaken on the 22nd of April 2024. • Test-pitting, including, soil sampling, logging and sampling was undertaken on the 23rd and 24th April, 2024. • Surface water and sediment sampling was undertaken on the 29th April 2024.
Service Location	Underground service utilities and intrusive sampling points were located (marked with spray paint) and cleared for excavation prior to the commencement of the intrusive investigation.
Soil Boring (hand excavations)	Fourteen (14) soil bores were advanced via hand auger to a maximum depth of 0.4 m bgl. The distribution of soil bores is shown on **Figure 4**, **Appendix A**.
Test Pitting	Twenty-one (21) test pits were advanced utilising a 5-tonne track mounted excavator to maximum depths of 2.3 bgl. The distribution of test pits within the site is shown on **Figure 4**, **Appendix A**.
Soil and Sediment Logging	The geological profile and observations of each test pit and soil bore were logged onsite in general accordance with Australian Standard AS 1726:2017 – Geotechnical Site Investigations.
Soil Sampling	• Soil samples were collected from 0.1 m bgl (near surface), 0.5 m bgl, 1.0 m bgl and every metre thereafter or at target depths. Additional samples were collected at changes in stratigraphy or if contamination indicators (such as staining or odours) are noted. • Each soil sample was screened for volatile organic compounds (VOC) content with a calibrated photo-ionisation detector (PID). The methodology for PID headspace testing was consistent with Section 7.4.3 Schedule B2 of the NEPM and include partially filling an airtight container with a fresh soil sample and then analysing the headspace vapour using an appropriately calibrated portable PID; • All excavated material was inspected for potential indicators of contamination including odour, sheen, staining and the presence of anthropogenic materials;

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Methodology

Activity	Details
	• Sampling was undertaken whilst wearing disposable nitrile gloves, transferring soils to the designated sampling containers. All soils were collected on the same days as excavation to ensure that contaminants prone to degradation and volatilisation (such as VHC, TRH and BTEX) are representative; and • Field duplicate samples were collected for QA/QC purposes, by carefully mixing the material and distributing evenly between sampling containers.
Asbestos Sampling Methodology	The procedure for asbestos identification in soils included: • Visual assessment of excavated materials and at ground surface for the presence of asbestos, completed by a 'Competent Person', as defined by the SafeWork NSW Code of practice: how to safely remove asbestos (2022); • Stantec field staff were equipped to undertake a NEPM field assessment methodology of soils for ACM, which includes collection of 10L soil samples and visual assessment against a coloured tarp for asbestos fragments. This process was not conducted at as there were no markers of ACM, as recommended by the applicable guidelines. AF and FA were assessed through collection of grab samples.
Soil Sample Analysis Selection	Analytical testing of soil samples generally targeted fill materials, however, where encountered, samples were also collected from the underlying natural soil and assessed for contamination indicators. A select number of natural soil samples were analysed for environmental contamination.
Sediment sampling	The upper 30 cm of sediment were collected with a decontaminated shovel. Care was taken to minimise the loss of this fine-grained material during retrieval of sediment. • The samples were collected as far from the shoreline as possible; • Samples were collected in laboratory provided containers.
Surface Water Sampling	Surface water samples were collected prior to sediment samples to minimise sediment disturbance in the sample caused by disturbance of sediments and increased turbidity. Water quality parameters were recorded from each surface water body using a calibrated water quality meter. Parameters measured include pH, electrical conductivity (EC), dissolved oxygen (DO), temperature and oxidation reduction potential (ORP). Surface water samples were collected directly into sampling bottles due to the low levels of surface water present during sampling. Surface water was collected at the surface and metals were assessed as both total and dissolved to allow for assessment of potential sediment impact / interference.
Test Pit Reinstatement	Test pits were backfilled with excavated material, compacted down to the extent practicable, and where possible, the removed grass/vegetation reinstated on top.
Decontamination Procedure	Reusable sampling equipment such as hand tools (shovel, trowel, mattock), sediment sampler and extendable sampling pole were decontaminated by washing with PFAS free decon (Liquinox), followed by a rinse with potable water and de-ionised water (rinsate water).

Activity	Details
Sample Preservation and Transport	Soil samples were placed in laboratory supplied containers. Other analytes were assessed from laboratory supplied containers with appropriate preservative. Sediment samples were collected from sediment sampler and placed into the designated laboratory supplied jars. Surface water samples were collected directly from the dam into the designated laboratory supplied bottles for the specified analytes. All samples were stored on ice in a sealed ice box (esky) while on site and in transit under strict chain of custody (COC) documentation.
Laboratory Analysis	Samples were submitted to a NATA Accredited Laboratory with appropriate Chain of Custody (COC) documentation.

8.2 SAMPLING LOCATIONS

The number of sampling locations was determined in consideration of the NSW EPA (2022) Sampling Design Guidelines based on a targeted and systematic sampling approach. Existing data and previous sampling locations advanced within the site during previous investigations were considered in the sampling approach for the DSI. As such, 50% of the recommended sampling density outlined in the NSW EPA Sampling Design Part 1 – Application guidelines (NSW EPA, 2020) was considered suitable to meet the purpose and objectives of the investigation. Targeted sampling was conducted at locations known or suspected of potential contamination and systematic sampling was conducted more broadly across the site to assess for contamination within the proposed construction footprint and to provide site coverage, mitigating against possible unexpected finds during construction.

The location and rationale for all existing sampling locations is outlined in **Table 8-2**.

Table 8-2 Sampling Locations Breakdown

Site Area / Investigation	Area (m^2)	Total no. sample locations*	Adopted investigation method
Previous Investigation Locations – Stantec, 2022			
Initial intrusive investigation with geotechnical investigation (19th, 20th and 21st December 2022).	20,600 (Gillieston Public School land)	28	Boreholes utilising a drill rig (opportunistic sampling in conjunction with geotechnical investigation from solid flight augers).
Previous Investigation Locations – Stantec, 2023			
Delineation of lead, zinc and nickel in soil for the northwestern and southern portion of the site	-	16	Hand excavations (utilising a hand auger and/ or shovel).
Additional intrusive investigation to assess potential contamination from an observed Above Ground Storage Tank (AST) (3rd February 2023).	-	4	Hand excavations (utilising a hand auger and/ or shovel).

DETAILED SITE INVESTIGATION

Methodology

Site Area / Investigation	Area (m^2)	Total no. sample locations*	Adopted investigation method
Additional intrusive investigation to delineate the lead, nickel and zinc contamination within the northwestern portion of the site and provide further site coverage (10th February 2023).	600	31	Hand excavations (utilising a hand auger and/ or shovel).
Validation sampling of soils for lead, nickel, zinc and asbestos completed as part of the remedial works and outlined in the RAP (Stantec, 2023e).	450	77	Hand excavations (utilising a hand auger and/ or shovel).
DSI Sampling Locations – Stantec, 2024			
Targeting northern area planned for activity	4,300	10 (during the current investigation) 26 total (including previous sample locations)	Test pitting, boreholes and hand excavations
Targeting southern area planned for activity	2,800	4 (during the current investigation) 12 total (including previous sample locations)	Test pitting, boreholes and hand excavations
Targeting areas planned for the maximum excavation depth outlined in the cut and fill plans.	-	4	Test pitting
Further delineation sampling within the lead impacted northwestern portion of the site.	-	10	Hand excavations (utilising a hand auger and/ or shovel).
Remainder of site within previously unassessed areas	-	7	Test pitting
Within dam (eastern boundary)	-	1	Surface water sampling
Within dam (eastern boundary)	-	1	Sediment sampling

*** includes validation sampling points** during **remediation**

9.0 RESULTS

9.1 SOIL

9.1.1 Field observations

Thirty-five (35) soil sampling points were advanced during the fieldwork activities, which are supplementary to those advanced during previous investigations. The typical subsurface profiles encountered are summarised in **Table 9-1** below and presented in graphical geological logs attached in **Appendix F**.

Table 9-1 Typical Sub-Surface Conditions Summary

Sub-Surface Horizon	Depth Range (mBGL)	Description
Fill	0.0 – 2.0	Fill encountered on site was typically described by the following profile – Sandy SILT to Silty SAND, brown to grey coloration, fine to medium grained, with inclusions of trace organics and/or gravels. Observations relating to waste / anthropogenic inclusions are provided below.
Natural, Alluvium	0.2 – 1.5	Clayey SAND, grey-brown, low to medium plasticity clay, fine to medium grained sand.
Natural, Residual	0.4 – 2.3	Either characterized as a Silty SAND, brown, fine grained, trace subangular to subrounded ironstone gravels, or an alluvium – Silty CLAY to CLAY, brown-red, grey, high plasticity, trace gravels, subangular to subrounded, fine grained profiles.
Rock (weathered)	1.0 – 1.4	Predominantly SANDSTONE and CONGLOMERATE, medium to fine grained, orange-brown, grey-brown, with gravel inclusions, subangular to subrounded.

The following key observations were noted during the DSI:

- The fill profile encountered across the site ranged from 0.1 – 2.0 mBGL. Fill thickness was observed to occur deepest within the northeastern portion of the site at sample location TP5, this location is within a drainage line that has potentially been filled.
  - The remainder of the site contains a consistent fill layer that varies between 0.1 and 1.2 mBGL.
- Trace anthropogenic materials (plastic, concrete, bricks, metal wire and nails) were encountered within shallow surficial soils, generally ranging between 0.0 – 0.3 mBGL at sample locations AHA103, AHA105, TP5 and TP20.
- Sheen, odour, discolouration and staining were not observed on ground surfaces or in excavated materials. Asbestos was not observed on ground surfaces or within soils, and large masses of demolition rubble in fill were not observed.
- Groundwater was not observed during the excavation of any sample locations.

9.1.2 Analytical results

The soil laboratory results gathered during the DSI and previous investigations are presented in the data summary tables provided in **Appendix E**, and the laboratory reports in their entirety are provided in **Appendix F**.

9.1.2.1 Human health criteria

All soil samples analysed were recorded either below the laboratory Limit of Reporting (LOR) or the applicable human health screening criteria, except for sample AHA103_0.35 -0,4 which reported a lead concentration of 780 mg/kg, exceeding the applicable HIL A criteria of 300 mg/kg.

9.1.2.2 Ecological criteria

All soil sample results were reported either below the laboratory LOR or the adopted ecological screening criteria.

9.2 SURFACE WATER

9.2.1 Field Observations

One (1) surface water sample was collected from the dam/ ephemeral drainage line within the northeast extent of the site in the vicinity of the neighbouring agricultural paddocks. The location of the sampling point is presented in **Figure 4**, **Appendix A**.

The following key observations were noted during the surface water assessment:

- Surface water was stagnant and only minimal water was observed within the dam during the sampling event.
- Cloudy and turbid water was observed at the sampled water body.
- During sampling, reeds and grasses were observed surrounding the waterbody.
- The water body appeared to receive surface water runoff from the site but also have a larger off-site catchment upgradient to the south, which is fed by an ephemeral stream and engineered stormwater infrastructure.

The water quality parameters in **Table 9-2** were gathered on-site during surface water sampling and observations noted by the sampler are provided in **Table 9-3**.

Table 9-2 Surface Water Quality Parameters

Sample ID	Sampling Date	pH	Electrical Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Temp °C	Measured ORP (mV)
SW1	29/04/2024	6.51	263.4	-13.58	14.1	38.1

Table 9-3 Surface Water Field Observations

Sample ID	Date	Observations
SW1	29/04/2024	Grasses and reeds surrounding the surface water body embankment. Observations of the water body included high turbidity, with a limited water column and a brown colouration. Medium sulfidic odour was noted during sampling.

9.2.2 Analytical results

The surface water laboratory results gathered during the DSI are presented in the data summary tables provided in **Appendix E,** and the laboratory reports in their entirety are provided in **Appendix F**.

All surface water samples analysed contained contaminant concentrations below the laboratory LOR, or the adopted criteria, except for the samples outlined below in **Table 9-4.**

Table 9-4 Surface Water Exceedances Summary

Analyte	Adopted Criteria	Sample Location	Laboratory Result
Copper (total)	ANZG (2018) Freshwater 95% toxicant DGV (1.4 µg/L)	SW1	19 µg/L
		DUP1-W	11 µg/L
Copper (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (1.4 µg/L)	SW1	2 µg/L
		TRIP1-W	2 µg/L
Lead (total)	ANZG (2018) Freshwater 95% toxicant DGV (3.4 µg/L)	SW1	13 µg/L
		DUP1-W	9 µg/L
Lead (filtered)	ANZG (2018) Freshwater 99% toxicant DGV (1.0 µg/L)	SW1	2 µg/L
Nickel (total)	ANZG (2018) Freshwater 99% toxicant DGV (8 µg/L)	SW1	9 µg/L
Nickel (filtered)	ANZG (2018) Freshwater 99% toxicant DGV (8 µg/L)	SW1	9 µg/L
Zinc (total)	ANZG (2018) Freshwater 95% toxicant DGV (8 µg/L)	SW1	140 µg/L
		DUP1-W	80 µg/L
Zinc (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (8 µg/L)	SW1	18 µg/L
		TRIP1-W	13 µg/L
PFOS	PFAS NEMP 2.0 Table 5 Freshwater 99% (0.00023 µg/L)	SW1	0.002 µg/L
		DUP1-W	0.002 µg/L
		TRIP1-W	0.0011 µg/L

9.3 SEDIMENT

9.3.1 Field observations

One (1) sediment sample was collected from the centre of an unnamed water body located at the eastern site boundary, at the same location from which a surface water sample (SW1) was collected. The approximate location of the sampling point is presented in **Figure 4**, **Appendix A**.

The following key observations were noted during the investigation:

- The sediment was characterised as clayey silt, brown to dark brown, low plasticity with rootlets and trace sands and gravels.
- Reeds and grasses were present at the sampling location with a waterbody approximate 0.1m deep present where samples were obtained.
- A moderate sulfidic odour was present upon sampling.
- The water body appeared to receive surface water runoff from the site but also have a larger off-site catchment upgradient to the south, which is fed by an ephemeral stream and engineered stormwater infrastructure.

9.3.2 Analytical results

The sediment laboratory results gathered during the DSI are presented in the data summary tables provided in **Appendix E**, and the laboratory reports in their entirety are provided in **Appendix F**.

All sediment samples analysed contained contaminant concentrations below the adopted laboratory LOR and/or below the adopted sediment screening criteria. However, it is noted that the screening criteria for the following pesticide and PCB analytes, which were was less than the reported LOR:

- Chlordane was reported as <0.1 mg/kg which is above the ANZG (2018) Sediment Quality Guidelines DGVs of 0.009 mg/kg.
- DDD was reported as <0.05 mg/kg which is above the ANZG (2018) Sediment Quality Guidelines DGVs of 0.007 mg/kg.
- Endrin was reported as <0.05 mg/kg which is above the ANZG (2018) Sediment Quality Guidelines GVs High of 0.0027 mg/kg.
- PCBs (Sum of total) was reported as <0.1 mg/kg which is above the ANZG (2018) Sediment Quality Guidelines GVs High of 0.034 mg/kg.

10.0 QUALITY ASSURANCE / QUALITY CONTROL

An assessment of the quality of data gathered during the DSI was undertaken in accordance with the Data Quality Indicators for both fieldwork and the laboratory performance, as specified in **Section 5.2.** Details of the QA/QC assessment are provided in **Appendix H**.

11.0 DISCUSSION

11.1 SOIL

11.1.1 Aesthetic Considerations

Schedule B1, Section 3.6 of the NEPM (NEPC, 2013) provides guidance for the assessment of soils based on aesthetic values as a result of impacts from low concern or non-hazardous inert foreign material in soil or fill as a result of human activity.

Areas targeted by this investigation were generally selected based on having an elevated risk of contamination, including locations potentially impacted by latent hazardous building materials and the presence of potential filling. Observations of anthropogenic materials in fill were predominantly traces of plastic, concrete, bricks, metal wire and nails generally within surficial soils but observed to a maximum depth of 0.3 mBGL.

Based on the proposed land-use and absence of significant inert materials observed within site soils or at surface, the soils are unlikely to cause substantial concern aesthetically or risk of physical harm. This would need to be reconsidered upon completion of construction to ensure that non-hazardous inert foreign material, such as construction debris, is not present at or near ground surface.

11.1.2 Human Health

11.1.2.1 Lead

All soil results were compared to the human health criteria applicable to the current and future land use, considerate of the design drawings current at the time of preparing this DSI report. Contaminant concentrations in soil were reported below the adopted human health criteria for current and future land use scenarios with exception to soil collected from hand excavation AHA103_0.35-0.4.

Hand excavation AHA103 is located approximately 10 m east of a location where elevated lead-impacted soils were identified during previous investigations. The likely source of contamination had been considered to be potential weathering of hazardous building material contained on or within buildings and structures (inferred source, Building D). The approximate lateral extent of soil remedial extents that are ongoing at the site is shown on **Figure 5** in **Appendix A**.

The surface soil sample collected from AHA103 (0.1m) contained a lead concentration of 45 mg/kg, below the adopted criteria, however, the sample collected from 0.35-0.4 contained a lead concentration greater than 250% of the criteria and is considered a ‘hotspot’ as defined in Schedule B1 of the ASC NEPM (2013). Conservatively, for remediation planning it should be considered that lead impacts are present from surface to 0.4 mBGL at and in the vicinity of AHA103, however, actual remediation extents are to be determined during remediation and validation of the site.

The contamination identified at AHA103 must be managed in accordance with the remediation guidance specified within the RAP (Stantec, 2023e). A revised RAP or addendum to the existing RAP (Stantec (2023e) must be prepared to consider the location for future remediation. The indicative lateral remediation extents, considerate of all data, are shown in **Figure 6** in **Appendix A**.

Stantec were advised by DOE that the construction timing for the proposed activity is anticipated to commence mid to late 2025, upon completion of the approvals process. Stantec understand that remediation and validation of the site is unlikely to occur until that time. However, to manage the health and safety of current site users until that time, interim management controls are required, as outlined below:

- An Interim Site Management Plan (or similar) should be prepared by a suitably qualified occupational hygienist to identify the risk areas and specify appropriate management controls and procedures to render the source-pathway-receptor linkages incomplete. All existing documents relating to contamination are to be supplied to the occupational hygienist.
- The Plan should be prepared as soon as practicable and must be considerate of the known or potential site receptors including students and teachers, groundskeepers and maintenance staff. The approximate lateral extent of known and approximate contamination is shown on **Figure 6**, **Appendix A**, and it should be noted that soils beneath buildings and structures has not been assessed.
- If the proposed activity were not to proceed as proposed, a more permanent management approach would be required such as further investigation and remediation of contaminated soils.

11.1.2.2 Asbestos

Whilst asbestos has not been identified during this investigation, asbestos has been previously observed within some fill soils excavated within the north western portion of the site. Soils at the site have generally been assessed using hand tools due to constraints presented by current buildings, structures and subsurface utilities. This sampling methodology limits observations of subsoils and appropriate sampling opportunities to assess for asbestos, and as such it is considered that asbestos could exist in fill at some locations within the site.

11.1.3 Ecological

All soil samples were assessed against ecological protection criteria applicable to the current and future land uses, considerate of the design drawings current at the time of preparing this DSI report.

Contaminant concentrations in soil were reported either below the laboratory LOR or the adopted ecological investigation criteria for current and future land use scenarios.

11.2 SURFACE WATER

11.2.1 Human Health

The surface water sample collected contained contaminant concentrations below the applicable human health screening criteria (aesthetic criteria). The surface water catchment likely encompasses the site but also the broader surrounds to the south, which is inferred upgradient. As such, waters within the dam may be subject to change dependent on the land uses and changes within the catchment.

A bore search did not identify domestic bores within 1km of the site and the local area is understood to be supplied by potable water. As such, the surface results were not compared against drinking water or recreational use guidelines.

11.2.2 Ecological

The surface water samples collected from the dam within the ephemeral drainage line contained total and dissolved copper and dissolved zinc concentrations that exceeded the adopted criteria for freshwater 95% toxicant DGV, and dissolved lead, total nickel and total zinc exceeded the freshwater 99% toxicant DGV. The PFOS concentration was also reported above the NEMP 2.0 Table 5 Freshwater 99% value.

The majority of metal exceedances are for total concentrations and may be attributable to the sediment load and suspended solids within the water sample collected. The concentrations could be attributed to ambient background concentrations in the local geology, and it is noted that the water was noted as being highly turbid and stagnant at the time of sampling, and further, the volume of water to sample from was limited (i.e. low water level). These conditions may have caused sediment interference. No known source of PFOS exists within the site based on the site history review and the soil and sediment sampling completed, however, it is noted that the water catchment collects surface waters from the broader surrounds to the south, which is inferred upgradient. As such, waters within the dam may be subject to off-site influences.

The dissolved metal exceedances for lead, copper and zinc were reported marginally above the applicable ecological screening criteria. Based on current information they and are not considered to present a significant ecological risk in the context of the proposed activity, and the nature of the local surface water catchment, which receive surface water from offsite

The origin of the elevated contaminants within the dam is unconfirmed, however, based on previous toxicity characteristic leaching procedure (TCLP) testing of impacted soils from the northwestern portion of the site, lead concentrations appear not to be leachable in soil. Sample location HA103_0.1 reported a maximum of 2.1 mg/L following TCLP analayis, during waste classification of SP03 as part of remedial works, which is below the NSW EPA General Solid Waste leachable concentration (TCLP1) criteria.

Further, in reference to the cut and fill plans (**Appendix C**), the dam is proposed to be filled with approximately 2m of material placed as part of the proposed activity. Under this activity scenario, these ecological exceedances do not present a complete source-pathway-receptor linkage.

The management options and fate of waters and sediments within the dam would require consideration by the civil construction contractor prior to commencement of construction.

11.3 SEDIMENT

Concentrations of analytes were reported below the adopted human health and ecological screening criteria for the sample analysed. Certain analytes were reported at an LOR above the adopted criteria, however, due to the absence of such contaminants in soil at elevated concentrations within the site, the risk is considered low and acceptable.

12.0 CONCEPTUAL SITE MODEL

With the additional information collected as part of this Detailed Site Investigation, the preliminary CSM summarised in **Section 4.1** has been revised and updated and summarised in **Table 12-1** below.

Table 12-1 Revised Conceptual Site Model

Contaminant Source	Impacted Media	Contaminants of Potential Concern	Potential Exposure Pathways	Receptors	Likelihood of Completeness
Hazardous building materials contained within former and existing site structures	Air Surficial Soils	Lead	Direct Contact Incidental Inhalation Incidental Ingestion	**Human:** Current and future site users Future site workers (including construction and maintenance workers) Neighbouring site users **Ecological:** Existing and future plant-based biota within the site	**Medium to high:** the impacted soils appear to extend beyond the previous approximate remediation extent outlined in the RAP (Stantec 2023e). There is a medium to high likelihood of exposure by children and other site users such as workers where interactions with impacted materials occur.
Weathering of exposed building structures					
Water in ephemeral drainage line	Surface water	Metals (total and dissolved) PFOS	Direct contact	**Ecological:** Existing and future plant-based biota within the site	**Low**: the reported metals exceedances are total metals and may be representative of sediment interference. The potential PFOS source is unknown and based on current soil data would suggest a possible off-site source. Exceedances related to ecological receptors only. The ephemeral drainage line is proposed to be filled as part of the construction. As such, the potential for ecological interaction with dam waters is incomplete. The management options and fate of waters and sediments within the dam would require consideration by the civil construction contractor prior to commencement of construction, ensuring that the waters do not present a potential risk to ecological receptors during management.

13.0 DATA GAPS AND UNCERTAINTIES

Based on the findings of this investigation, the following data gaps are noted:

- Soil quality beneath buildings and hardstand areas (particularly concrete pathways and the staff carpark) were inaccessible for a visual or intrusive assessment, so any potential contamination impact beneath the buildings or hardstand has not been assessed.
  - These inaccessible areas proposed for redevelopment will require assessment as specified in Section 14.0 of the RAP (Stantec, 2023e).
- The concept plans and cut and fill plans indicate that excavation works will be required along Gillieston Road, this area has not been assessed as part of this investigation.
- The exact vertical and lateral extent of lead impacted soils at the site is remains undefined, however, it is envisaged that this would be resolved during remediation.
- Groundwater quality and flow direction has not been assessed. Groundwater has not been observed during any intrusive investigations and as such is not anticipated to present a significant contamination risk to the proposed activity or the current and future land uses.
- A hazardous materials survey was not completed for potentially hazardous building materials. This should be conducted prior to demolition of buildings and structures.
- At the time of preparing this report, the RAP (Stantec 2023e) had not been implemented.
- Hand tools were utitlised for sampling at certain locations due to constraints presented by current buildings, structures and subsurface utilities. This sampling methodology limits observations of subsoils and visual assessment for contaminant indicators, particularly asbestos.



14.0 CONCLUSIONS

Stantec has completed a DSI to support the proposed activity of additional school facilities and infrastructure at Gillieston Public School, located at the corner of Northview Street and Ryans Road, Gillieston Heights, NSW and legally identified as Lot 51 DP 1162489 and Lot 2 DP1308605. The DSI was supplementary to previous investigations and should be read in conjunction with existing reports.

The proposed activity broadly consists of the following:

- Construction of a building to be utilised as a learning hub, a library, administration and staff hub.
- Construction of additional buildings to be used pre school, OSHC facility, canteen and hall.
- Construction of associated infrastructure such as utilities and carparks.
- Bulk earthworks to achieve site levels and external works (i.e. landscaping and footpaths).

The objectives of the investigation were to:

- Undertake an intrusive investigation program to identify whether additional contamination impacts are present (further to those previously identified (Stantec, 2023c), and if so, to what extent; and
- Prepare a report to outline the results of the investigation and provide:
  - A statement on the suitability of the site for the proposed use; and
  - Recommendations on any future actions including management, remediation or further investigation (if required).

Based on observations, laboratory data and information gathered during the current and previous investigations, the following is concluded:

- The DSI included the advancement and sampling from thirty-five sampling locations utilising both test-pitting and hand excavation methodologies as well as sampling surface water and sediments of the onsite water body (eastern boundary).
- An exceedance of applicable human health criteria for lead was identified in soil sample AHA103_0.35-0.4, which is considered a ‘hotspot’ as per the definition of Schedule B1 of the ASC NEPM. The vertical extent of contamination is currently unknown and the sampling point is located approximately 10 m east of an previously identified as lead impacted (refer to RAP, Stantec 2023e).
- Under the current and future land use, the lead concentration at AHA103 presents an unacceptable risk to human health for current and future site users and will require management. Conservatively, for remediation planning it should be considered that lead impacts are present from surface to 0.4 mBGL at and in the vicinity of AHA103, however, actual remediation extents are to be determined during remediation and validation of the site.
  - Until such time that site remediation and validation works have been completed and/or a long-term environmental management plan has been completed for the site, interim management of impacted soils is recommended not only for the impacts at AHA103 but for other locations within the site known to contain contamination (see recommendations below).
-



- Whilst asbestos has not been identified during this investigation, asbestos has been previously observed within some fill soils excavated within the north western portion of the site. Soils at the site have generally been assessed using hand tools due to constraints presented by current buildings, structures and subsurface utilities. This sampling methodology limits observations of subsoils and appropriate sampling opportunities to assess for asbestos, and as such it is considered that asbestos could existing in fill at some locations within the siteThere were no exceedances of the applicable ecological screening criteria in soil.
- There were no exceedances of applicable screening criteria in sediment.
- Exceedances of ecological criteria for total and dissolved copper and zinc, dissolved lead, total nickel and PFOS were reported within surface water samples collected from the dam. It is noted that the water catchment collects surface waters from the broader surrounds to the south (off-site), which is inferred upgradient. As such, waters within the dam may be subject to off-site influences. The dam is proposed to be filled with approximately 2m of material placed as part of the proposed activity. Under this activity scenario, these ecological exceedances do not present a complete source-pathway-receptor linkage.

From the findings of this investigation and previous investigations, with the exception of the areas identified as being impacted by lead in soil, indicatively shown on **Figure 6** in **Appendix A**, the site is suitable for the current and proposed land-use as school infrastructure. Based on current information, it is considered that the lead impacted soil can be made suitable following implementation of the recommendations outlined below, and the potential risk to site users in lieu of eventual remediation (post-approval) can be managed through implementation of an Interim Site Management Plan (or similar).

14.1 RECOMMENDATIONS

Based on the findings of this assessment and with reference to the proposed activity, purpose and objectives, the following recommendations are made:

- Stantec were advised by DOE that the construction timing for the proposed activity is anticipated to commence mid to late 2025, upon completion of the approvals process. Stantec understand that remediation and validation of the site is unlikely to occur until that time. However, to manage the health and safety of current site users until that time, interim management controls are required, as outlined below:
  - An Interim Site Management Plan (or similar) should be prepared by a suitably qualified occupational hygienist to identify the risk areas and specify appropriate management controls and procedures to render the source-pathway-receptor linkages incomplete. All existing documents relating to contamination are to be supplied to the occupational hygienist.
  - The Plan should be prepared as soon as practicable and must be considerate of the known or potential site receptors including students and teachers, groundskeepers and maintenance staff. The approximate lateral extent of known and approximate contamination is shown on **Figure 6**, **Appendix A**, and it should be noted that soils beneath buildings and structures have not been assessed.
  - If the proposed activity were not to proceed as proposed, a more permanent management approach would be required such as further investigation and remediation of contaminated soils.

Conclusions

- A revised RAP or addendum to the existing RAP (Stantec (2023e) must be prepared to consider the findings of this investigation.
  - This approximate lateral extents for remediation are shown on **Figure 6**, **Appendix A**. Delineation can occur during implementation of the RAP, with final remediation extents to be determined during remedial activities and site validation.
  - Upon completion of the remediation works and successful soil validation, a Validation Report must be prepared in accordance with NSW EPA (2020), by a suitably qualified and experienced contaminated land professional.
  - Construction activities undertaken at the site must be planned and executed considerate of this DSI report and the revised/ addendum Remediation Action Plan (RAP).
- Areas of the site containing asbestos should be recorded under an asbestos management plan and associated register in accordance with SafeWork NSW requirements, inclusive of current buildings and structures, and any soils that are identified as being asbestos impacted.
- The management options and fate of waters and sediments within the dam require consideration by the civil construction contractor prior to commencement of construction activities.
- All future activities should be conducted as per a suitable Construction and Environmental Management Plan (CEMP) to minimise potential risks to human health and the environment during implementation of the RAP.
- Where material is to be removed from the site as part of the RAP implementation and/ or future activity, waste classification assessments for such materials must occur in accordance with the NSW EPA Waste Classification Guidelines (2014) or an applicable resource recovery order/exemption.
- Any material being removed from site be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order.

15.0 MITIGATION MEASURES

See the below table that outlines the appropriate mitigation measures for contamination risks outlined in this report.

Table 15-1 Mitigation Measures

Project Stage Design (D) Construction (C) Operation (O)	Mitigation Measures	Relevant Section of report
D / C	An updated or new revision of the Remediation Action Plan (RAP) is to be prepared that outlines the additional contamination identified, and the remediation strategy for the identified contamination above applicable land use criteria at the site.	Section 5.0, Section 9.0, Section 11.0, Section 12.0 and Section 13.0.
D / C	The data gaps identified concerning contamination at the site should be assessed during future investigations/ remediation works	Section 13.0 and Section 14.1
C	All future activities should be conducted as per a suitable Construction and Environmental Management Plan (CEMP) to minimise potential risks to human health and the environment during implementation of the RAP.	Section 14.0
C	Any material being removed from site be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order.	Section 14.0

16.0 LIMITATIONS

This assessment has been undertaken in general accordance with the current "industry standards" for a Detailed Site Investigation for the purpose and objectives and scope identified in this report.

These standards are set out in:

- NSW EPA (2020) *Consultants Reporting on Contaminated Land,* NSW Environment Protection Authority; and
- *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM) 1999 (NEPC, 1999) as varied May 2013 (the 'NEPM 2013').

This assessment report is not any of the following:

- A Site Audit Report or Site Audit Statement as defined under the *Contaminated Land Management Act 1997* (CLM Act).
- An Environmental Site Investigation sufficient for an Environmental Auditor to be able to conclude a Site Audit Report and Site Audit Statement.
- A geotechnical report.
- A detailed hydrogeological assessment in conformance with NSW DEC (2007) *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*.
- An assessment of groundwater contaminants potentially arising from other sites or sources nearby.
- A total assessment of the site to determine suitability of the entire parcel of land at the site for one or more beneficial uses of land.
- A hazardous building material survey that will identify any specific building materials on site, which may pose a risk to human health or the environment.
- The agreed scope of this assessment has been limited for the current purposes of the Client. The assessment may not identify contamination occurring in all areas of the site.

This Document has been provided by Stantec subject to the following limitations:

- This Document has been prepared for the particular purpose outlined in Stantec's proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.
- The scope and the period of Stantec's services are as described in Stantec's proposal, and are
- subject to restrictions and limitations. Stantec did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Stantec in regards to it.
- Conditions may exist which were undetectable given the limited nature of the enquiry Stantec was
- retained to undertake with respect to the site. Variations in conditions may occur between investigatory locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.



Limitations

- In addition, it is recognised that the passage of time affects the information and assessment
- provided in this Document. Stantec's opinions are based upon information that existed at the time of the production of the Document. It is understood that the services provided allowed Stantec to form no more than an opinion of the actual conditions of the site at the time this Document was prepared and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.
- Any assessments made in this Document are based on the conditions indicated from published
- sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.
- Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Stantec for incomplete or inaccurate data supplied by others.
- Stantec may have retained sub consultants affiliated with Stantec to provide services for the benefit of Stantec. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any direct legal recourse to, and waives any claim, demand, or cause of action against, Stantec's affiliated companies, and their employees, officers and directors.

17.0 REFERENCES

ASSMAC Acid Sulfate Soils Assessment Guidelines, Acid Sulfate Soils Management Advisory Committee, August 1998 (ASSMAC 1998)

Australian Standard 4482.1-2005: Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil.

Guideline on the Investigation Levels for Soil and Groundwater' of the *National Environment Protection (Assessment of Site Contamination) Measure* (NEPM) *1999* (NEPC, 1999) as varied May 2013 (the 'NEPM 2013'); Standards Australia (2005).

Guidelines for Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia, Western Australia Department of Health (WA DOH). 2009

NSW DPIE (2021) eSPADE v2.1, NSW Department of Planning Industry and Environments (DPIE), Retrieved from: https://www.environment.nsw.gov.au/eSpade2Webapp.

NSW EPA (2015) *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*. NSW Environment Protection Authority, Sydney. September 2015.

NSW EPA (2017) *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd edition)*. NSW Environment Protection Authority, Sydney. October 2017.

NSW EPA (2020) *Consultants Reporting on Contaminated Land*, Contaminated Land Guidelines, NSW Environment Protection Authority, Sydney, April 2020.

NSW Government (2021) *MinView*, Mining, Exploration and Geoscience, NSW Government, Regional NSW, Retrieved from: https://minview.geoscience.nsw.gov.au/#/?lon=148.9143&lat=-32.65607&z=6&bm=bm1&l=.

Office of Environment and Heritage (OEH) (2017) *Acid Sulfate Soils*. NSW Government, November 2017.

NSW Department of Urban Affairs and Planning (2021) Managing Land Contamination: Planning Guidelines: SEPP Hazards and Resilience, 2021 (SEPP 55)

NSW Department of Planning and Environment, State Environmental Planning Policy (Resilience and Hazards) 2021

NSW Environment Protection Authority Guidelines for the NSW Site Auditor Scheme, 3rd Edition (NSW EPA, 2017);

NSW EPA Consultants Reporting on Contaminated Land: Contaminated Land Guidelines. New South Wales Environment Protection Authority, April 2020, Updated May 2020 (NSW EPA 2020)

NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste;

References

NSW EPA (2022) Sampling Design Part 1 – Application; Contaminated land guidelines (NSW EPA, 2022);

NSW EPA (2022) Sampling Design Part 2 – Interpretation; Contaminated land guidelines (NSW EPA, 2022);

Stantec Australia Pty Ltd (2023a), *Geotechnical DD – Preliminary Desktop Review, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 8 February 2023.

Stantec Australia Pty Ltd (2023c), *Intrusive Geotechnical Report, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 10 February 2023

Stantec Australia Pty Ltd (2023b), *Targeted Soil Investigation – Initial Advice – Contamination,* Prepared for School Infrastructure NSW, Issued 8 February 2023.

Stantec Australia Pty Ltd (2023d), *Preliminary Desktop Site Investigation - Contamination, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 10 March 2023.

Stantec Australia Pty Ltd (2023e), *Remediation Action Plan, Gillieston Public School*, Prepared for School Infrastructure NSW, Issued 21 March 2023.

APPENDIX A – FIGURES

Site and Location Plan

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-048
Drawn By: CC, Checked By: CL
Figure: 01 Rev: 01
Date: 2024-07-02

Stantec

Legend

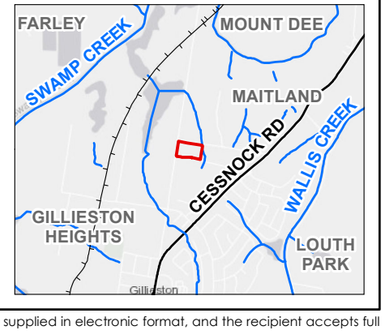
- Site Boundary
- Watercourse
- Major Road
- Railway
- Contour
- Cadastre
- Proposed Redvelopment Area - Neighbouring Property
- Proposed Redevelopment Area - School Grounds

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourse, Major Road, Railway, Contour (NSW SS)

0 10 20 30
Metres

Scale at A3: 1:1000



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Previous Sampling Plan - Overview

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-049
Drawn By: CC, Checked By: CL
Figure: 02 Rev: 01
Date: 2024-07-02

Stantec

Legend

- Site Boundary
- Watercourse
- Major Road
- Railway
- Cadastre
- Proposed Redevelopment Area - Neighbouring Property
- Proposed Redevelopment Area - School Grounds
- Approximate Remediation Extent

Previous Sample Location

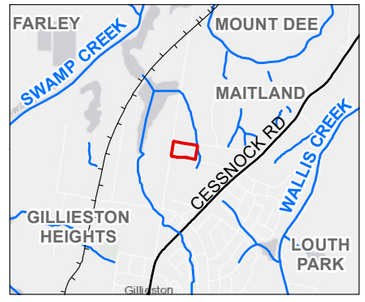
- Previous Sample Location
- Validation Sample - Lead Exceedance
- Validation Sample

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourses, Railway and Major Roads (NSW SS)

0 10 20 30 Metres

Scale at A3: 1:750



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Previous Sampling Plan - Remediation

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-046
Drawn By: CC, Checked By: CL
Figure: 03 Rev: 01
Date: 2024-07-02

Stantec

Legend

- Site Boundary
- Watercourse
- Railway
- Major Roads
- Cadastre
- Offsite Investigation Area
- Additional Onsite Investigation Area
- Approximate Remediation Extent

Previous Sample Location

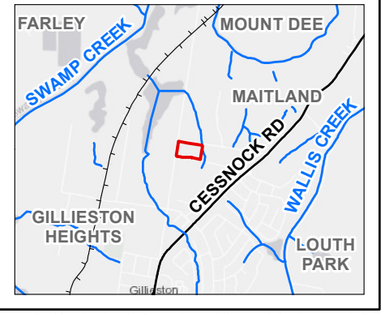
- Previous Sample Location
- Validation Sample - Lead Exceedance
- Validation Sample

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourses, Railway and Major Roads (NSW SS)

0 2.5 5 7.5 Metres

Scale at A3: 1:250



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Sample Location Plan - Overview

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-051
Drawn By: CC, Checked By: CL
Figure: 04 Rev: 01
Date: 2024-07-02

Stantec

Legend

- Site Boundary
- Watercourse
- Major Road
- Railway
- Cadastre
- Proposed Redvelopment Area - Neighbouring Property
- Proposed Redevelopment Area - School Grounds
- Approximate Remediation Extent

Sample Locations

- Hand Auger
- Surface Water/ Sediment
- Test Pit

Previous Sample Location

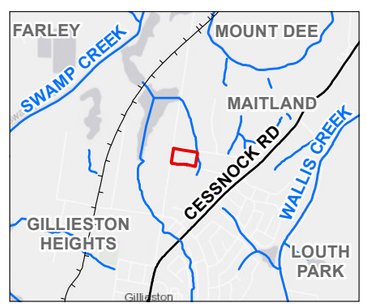
- Previous Sample Location
- Validation Sample - Lead Exceedance
- Validation Sample

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourses, Railway and Major Roads (NSW SS)

0 10 20 30 Metres

Scale at A3: 1:750



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Sampling Plan - Previous Remediation Area

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-050
Drawn By: CC, Checked By: CL
Figure: 05 Rev: 01
Date: 2024-07-02

Stantec

Legend

- Site Boundary
- Watercourse
- Railway
- Major Roads
- Cadastre
- Offsite Investigation Area
- Additional Onsite Investigation Area
- Approximate Remediation Extent

Previous Sample Location

- Previous Sample Location
- Validation Sample - Lead Exceedance
- Validation Sample

Sample Locations

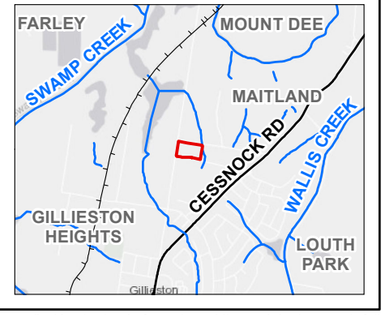
- Hand Auger
- Test Pit

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourses, Railway and Major Roads (NSW SS)

0 2.5 5 7.5
Metres

Scale at A3: 1:250



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Sample Location Plan - Additional Remediation

Gillieston Public School,
Gillieston Heights NSW

Project Code: 304100928-GS-052
Drawn By: CC, Checked By: CL
Figure: 06 Rev: 01
Date: 2024-07-03

Stantec

Legend

- Site Boundary
- Watercourse
- Railway
- Major Roads
- Cadastre
- Offsite Investigation Area
- Additional Onsite Investigation Area

Sample Locations

- Hand Auger
- Test Pit

Previous Sample Location

- Previous Sample Location
- Validation Sample - Lead Exceedance
- Validation Sample

Remedial Extent

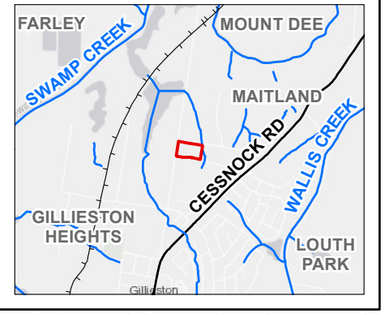
- Approximate Additional Areas Requiring Remediation
- Approximate Initial Remediation Extent
- Previous Remediation Area

Notes:
1. Coordinate System: GDA2020 MGA Zone 56

References:
1. Aerial imagery (Nearmap, June 2024)
2. Cadastre (NSW SS, 2022)
3. Watercourses, Railway and Major Roads (NSW SS)

0 2.5 5 7.5
Metres

Scale at A3: 1:250

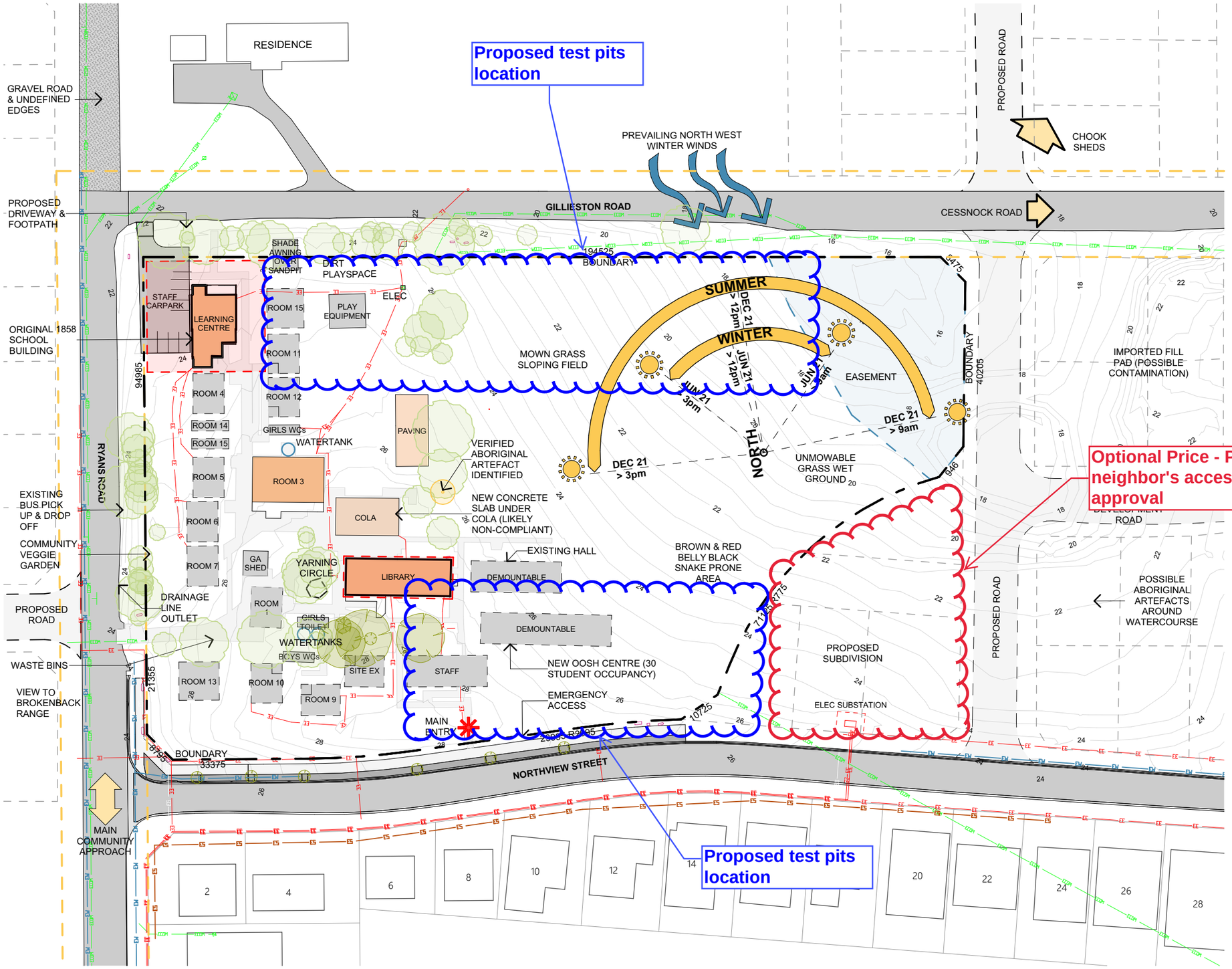


This document has been prepared based on information provided by others as cited in the data sources. Stantec has not verified the accuracy and/or completeness of this information and shall not be responsible for any errors or omissions which may be incorporated herein as a result. Stantec assumes no responsibility for data supplied in electronic format, and the recipient accepts full responsibility for verifying the accuracy and completeness of the data.

APPENDIX B – CONCEPT DESIGN

CONCEPT DESIGN

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

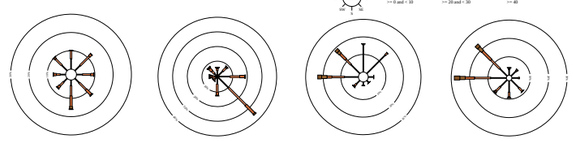


LEGEND

- BOUNDARY
- PERMANENT STRUCTURE
- HERITAGE VALUE BUILDINGS
- PLAYSPACE
- EXISTING DEMOUNTABLE
- ROADS
- EXISTING SITE PATHWAYS
- GRAVEL ROAD
- PROPOSED ROAD
- EASEMENT
- EXTENT OF PROPOSED ROAD WIDENING
- WATER COURSE
- SCHOOL MAIN ENTRY
- EXISTING TREE

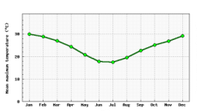
CLIMATE ANALYSIS

WIND SPEED AND DIRECTION

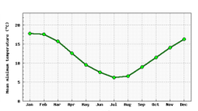


SUMMER JANUARY 9AM | SUMMER JANUARY 3PM | WINTER JULY 9AM | WINTER JULY 3PM

TEMPERATURE RANGE

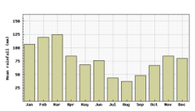


MEAN MAXIMUM TEMP RANGE: 17.5 - 30.0°C



MEAN MINIMUM TEMP RANGE: 6.2 - 17.5°C

RAINFALL



MEAN RAINFALL RANGE: 37.3 - 125.0MM

Source: BOM, Maitland Airport Weather Station

4814 1105

RevA 17.10.23

Site Analysis

Gillieston Public School

100 Ryans Road

0m 10 20 30 40 50 1:1000 @A3

SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: BIMcloud: BIMSERVER - BIMcloud Basic for Archicad 25/4814 Gillieston PS/4814.515.05 Gillieston PS Concept Design date:17/10/2023 time: 10:22 AM

CONCEPT DESIGN

1. Dimensions are in millimetres unless otherwise shown.
2. Work to given dimensions. Do not scale from drawing.
3. Check all dimensions on site prior to construction and fabrication.
4. Bring any discrepancies to the attention of the proprietor & architect.

LEGEND

- HALL, CANTEEN & OSHC
- LIBRARY HUB
- ADMINISTRATION
- STAFF HUB
- PRESCHOOL
- 40-STUDENT YARNING CIRCLE
  Subject to future detail and co-design from both knowledge holders and local Aboriginal artists
- ECOLOGICAL PLAY
- SITE TRANSITION & TERRACED PLAY
- OPEN PLAY
- SPORTS COURT
- PARKING
- KISS & DROP
- BUS BAY

Proposed test pits location

Optional Price - Pending neighbor's access approval

Proposed test pits location

BUILDING D
EX. HERITAGE BUILDING

BUILDING C

COLA

BUILDING B

BUILDING A

STAFF PARKING

CIRCULATION

STAIR

0m 10 20 30 40 50 1:1000 @A3

4814
SK1011
RevE 04.03.24

Option 2: Proposed Site Plan

Gillieston Public School
100 Ryans Road

SHAC

Nominated Architect Justin Hamilton (6160) | ABN 32 131 584 846

Drawing and design © SHAC Pty Ltd. The signed control copy of this drawing is held by SHAC Pty Ltd. | Ref: P:\4800\4814 Maitland Gillieston New PS\500 CAD Graphics and Models\515 Sketch Design\4814.515.10 Gillieston PS Concept Design (NEW OPTIONS ONLY).pln date:4/03/2024 time: 5:50 PM

APPENDIX C – CUT AND FILL PLAN



ESL TO BULK EARTHWORK LEVEL											
LOWER VALUE		UPPER VALUE		COLOUR	LOWER VALUE		UPPER VALUE		COLOUR
-4.0	to	-3.8	m		0.0	to	0.2	m	
-3.8	to	-3.6	m		0.2	to	0.4	m	
-3.6	to	-3.4	m		0.4	to	0.6	m	
-3.4	to	-3.2	m		0.6	to	0.8	m	
-3.2	to	-3.0	m		0.8	to	1.0	m	
-3.0	to	-2.8	m		1.0	to	1.2	m	
-2.8	to	-2.6	m		1.2	to	1.4	m	
-2.6	to	-2.4	m		1.4	to	1.6	m	
-2.4	to	-2.2	m		1.6	to	1.8	m	
-2.2	to	-2.0	m		1.8	to	2.0	m	
-2.0	to	-1.8	m		2.0	to	2.2	m	
-1.8	to	-1.6	m		2.2	to	2.4	m	
-1.6	to	-1.4	m		2.4	to	2.6	m	
-1.4	to	-1.2	m		2.6	to	2.8	m	
-1.2	to	-1.0	m		2.8	to	3.0	m	
-1.0	to	-0.8	m		3.0	to	3.2	m	
-0.8	to	-0.6	m		3.2	to	3.4	m	
-0.6	to	-0.4	m		3.4	to	3.6	m	
-0.4	to	-0.2	m		3.6	to	3.8	m	
-0.2	to	0.0	m		3.8	to	4.0	m	

EARTHWORKS QUANTITIES

TOTAL CUT = 4800 m³
TOTAL FILL = 6500 m³
TOTAL FILL OVER CUT = 1700 m³

SCALE 1:500 @ A1
SCALE 1:1000 @ A3

0 5 10 20 30 40 50 metres

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NOT FOR CONSTRUCTION

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
A	ISSUED FOR CONCEPT DESIGN	22.09.23	MDM	UK

1cm at full size

North

Client
SCHOOLS INFRASTRUCTURE NSW
8/259 GEORGE STREET
SYDNEY NSW 2000
PHONE : 1300 482 651

Architect
SHAC ARCHITECTS
224 MAITLAND ROAD
ISLINGTON, NSW 2296
PHONE : 4961 5888

ACOR Consultants Pty Ltd
The Forum Level 1, Suite 1 240-244 Pacific Highway
Charlestown NSW 2290
T +61 2 4926 4811
ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Project
GILLIESTON HEIGHTS PRIMARY SCHOOL
100 RYANS ROAD
GILLIESTON HEIGHTS, NSW, 2321

Drawing Title
BULK EARTHWORKS PLANS
PHASE 1

Drawn	Date	Scale A1	Q.A. Check	Date
MDM	SEP 2023	1:500	UK	19.09.23
Designed	Project No.		Dwg. No.	Issue
SJO	NS221454		C04-001	A

S:\NS\2021\NS221454\Drawings\CAD\C04\Drawings\NS221454-C04-001.dwg
Sep 22, 2023 - 2:56pm



ESL TO BULK EARTHWORK LEVEL				
LOWER VALUE		UPPER VALUE		COLOUR
-2.0	to	-1.8	m	
-1.8	to	-1.6	m	
-1.6	to	-1.4	m	
-1.4	to	-1.2	m	
-1.2	to	-1.0	m	
-1.0	to	-0.8	m	
-0.8	to	-0.6	m	
-0.6	to	-0.4	m	
-0.4	to	-0.2	m	
-0.2	to	0.0	m	
0.0	to	0.2	m	
0.2	to	0.4	m	
0.4	to	0.6	m	
0.6	to	0.8	m	
0.8	to	1.0	m	
1.0	to	1.2	m	
1.2	to	1.4	m	
1.4	to	1.6	m	
1.6	to	1.8	m	
1.8	to	2.0	m	

EARTHWORKS QUANTITIES

TOTAL CUT = 3100 m³
TOTAL FILL = 0 m³
TOTAL CUT OVER FILL = 3100 m³

NOT FOR CONSTRUCTION

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Issue	Description	Date	Drawn	Approved
A	ISSUED FOR CONCEPT DESIGN	22.09.23	MDM	UK

1cm at full size 10cm 20cm

North

Client
SCHOOLS INFRASTRUCTURE NSW
8/259 GEORGE STREET
SYDNEY NSW 2000
PHONE : 1300 482 651

Architect
SHAC ARCHITECTS
224 MAITLAND ROAD
ISLINGTON, NSW 2296
PHONE : 4961 5888

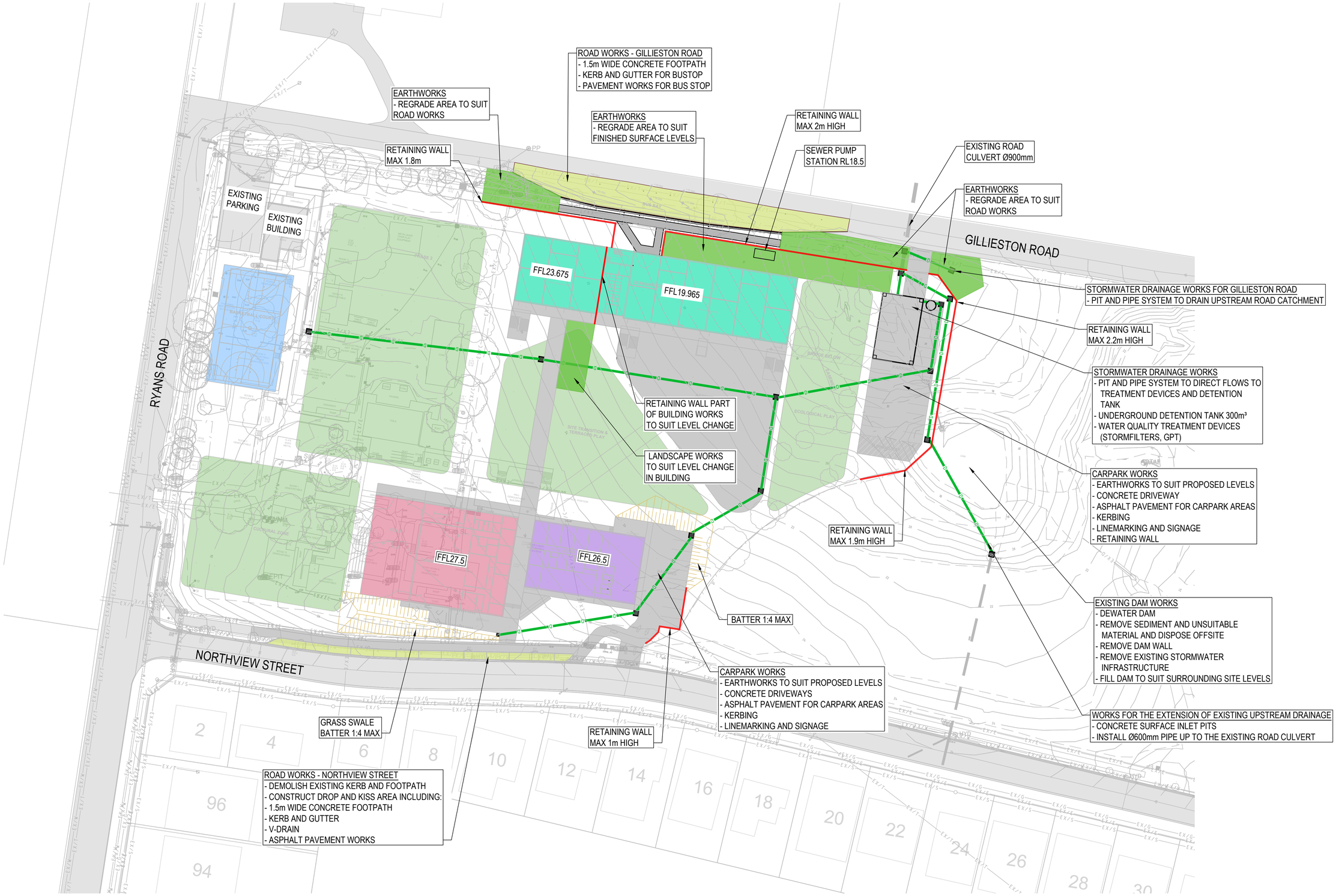
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CONSULTANTS ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

Project
GILLIESTON HEIGHTS PRIMARY SCHOOL
100 RYANS ROAD
GILLIESTON HEIGHTS, NSW, 2321

Drawing Title
BULK EARTHWORKS PLANS
PHASE 2

Drawn	Date	Scale A1	Q.A. Check	Date
MDM	SEP 2023	1:500	UK	19.09.23
Designed	Project No.		Dwg. No.	Issue
SJO	NS221454		C04-101	A

S:\NS\2021\NS221454\Drawings\ACOR\Drawings\NS221454-C04-101.dwg
Sep 22, 2023 - 3:19pm



SCALE 1:500 @ A1
SCALE 1:1000 @ A3
0 5 10 20 30 40 50 metres

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Issue	Description	Date	Drawn	Approved
A	ISSUED FOR CONCEPT DESIGN	20.09.23	MDM	UK

North

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Project
GILLIESTON HEIGHTS PRIMARY SCHOOL
100 RYANS ROAD
GILLIESTON HEIGHTS, NSW, 2321

Drawing Title
GENERAL ARRANGEMENT PLAN
PHASE 1 - SITE PLAN

Drawn	Date	Scale A1	Q.A. Check	Date
MDM	SEP 2023	1:500	UK	19.09.23
Designed	Project No.		Dwg. No.	Issue
SJO	NS221454		C05-001	A

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Sep 21, 2023 - 3:06pm

APPENDIX D – PHOTO LOG

Detailed Site Investigation – Gillieston Heights Public School

Photographic Log

April 2024

Stantec

Photo Location: Gillieston Heights Public School

Supporting Photos:



Photo 1: view of the dam east of the public school, facing north.



Photo 2: Sampling point SW1, facing south.



Photo 3: Sediment within the western portion of the dam, facing east.



Photo 4: Natural profile within TP3, facing south.

Photo Location: Gillieston Heights Public School

Supporting Photos:



Photo 5: Fill profile within TP5, facing west.



Photo 6: Fill spoil excavated from TP5, facing north.



Photo 7: Shallow rock observed within TP14, facing west.



Photo 8: Fill materials overlying natural profile within TP19, facing west. Note carbonaceous material lense.

Photo Location: Gillieston Heights Public School

Supporting Photos:

	
Photo 9: Former concrete bollard observed within TP20, facing south.	**Photo 10**: Soil profile within HA22.
	
Photo 11: Soil profile within AHA102. Note moisture within bottom of bore.	**Photo 12**: Metal wiring encountered within AHA103.

Photo Location: Gillieston Heights Public School

Supporting Photos:

	
Photo 13: Service encountered within AHA105.	**Photo 14**: Soil profile within AHA112.

Design with
community in mind

Stantec

APPENDIX E – RESULTS TABLE

Stantec

Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

	Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
	pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
	-	No unit	-	mg/kg	mg/kg	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	-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																	
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																	
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																	
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																	
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential											4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																	
NEPM 2013 ESL UR/POS, Coarse Soil							120					120	300	2,800		180	

Location Code	Field ID	Sample Type	Date	Lab Report Number																
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	63	63	<20	<50	<100	<100	<100	<20	<50
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	55	<50	55	<20	61	<100	<100	<100	<20	61
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP8 0.9-1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	62	62	<20	<50	<100	<100	<100	<20	<50
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
					pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					-	No unit	-	mg/kg	mg/kg	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					-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																					
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential															4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil											120					120	300	2,800		180	
TP17																					
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	63	63	<20	<50	<100	<100	<100	<20	<50
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP18																					
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP19																					
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	53	<50	53	<20	<50	<100	<100	<100	<20	<50
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
TP20																					
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																					
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	82	<50	82	<20	<50	110	<100	110	<20	<50
TP/HA22																					
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	<0.8	<100	<20	<20	50	51	<110	<25	<25	92	<120	<210	<25	<25

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
					pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					-	No unit	-	mg/kg	mg/kg	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					-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																					
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil											120					120	300	2,800		180	
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	0.3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	0.3	1	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH05_1.5	Normal	19 Dec 2022	SE241126	0.8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	82	<110	<25	<25	110	<120	<210	<25	<25
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	1.2	1	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	94	110	210	<25	<25	180	<120	<210	<25	<25
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	-	-	-	1.5	<100	<20	<20	130	130	260	<25	26	230	<120	250	<25	26
	BH14_1.3	Normal	20 Dec 2022	SE241126	0.2	1	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	-	-	6.1	<100	<20	44	270	150	470	<25	63	380	<120	440	<25	63
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	0.7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	-	-	4.6	<100	<20	28	240	130	400	<25	41	330	<120	370	<25	41
	QC400	Interlab_D	20 Dec 2022	957232	-	-	-	-	-	<20	46	350	230	626	<20	75	490	130	695	<20	75
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	59	<110	<25	<25	<90	<120	<210	<25	<25
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	86	65	150	<25	<25	130	<120	<210	<25	<25
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH19_0.5	Normal	21 Dec 2022	SE241126	1.0	1	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	53	<110	<25	<25	<90	<120	<210	<25	<25
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	60	71	130	<25	<25	120	<120	<210	<25	<25
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	54	<110	<25	<25	<90	<120	<210	<25	<25
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	55	60	110	<25	<25	100	<120	<210	<25	<25
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	53	<110	<25	<25	<90	<120	<210	<25	<25
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	62	<110	<25	<25	93	<120	<210	<25	<25
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	QA200	Field_D	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
	QC200	Interlab_D	19 Dec 2022	957232	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	-	-	<0.8	<100	<20	<20	<45	52	<110	<25	<25	<90	<120	<210	<25	<25
	BH28_1.0	Normal	19 Dec 2022	SE241126	0.4	1	-	<0.8	-	<20	<20	<45	<45	<110	<25	<25	<90	<120	<210	<25	<25
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	<100	<20	39	160	74	270	<25	50	210	<120	260	<25	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	<100	<20	<20	64	47	110	<25	<25	97	<120	<210	<25	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	<100	<20	29	150	93	270	<25	39	210	<120	250	<25	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	<100	<20	25	110	71	210	<25	34	160	<120	<210	<25	-

Stantec

Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
					pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					-	No unit	-	mg/kg	mg/kg	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					-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																					
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential															4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil											120					120	300	2,800		180	
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	<100	<20	27	150	73	250	<25	38	200	<120	240	<25	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	<20	<20	99	100	199	<20	<50	170	<100	170	<20	<50
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	<0.8	<100	<20	<20	61	99	160	<25	<25	140	<120	<210	<25	<25
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	<0.8	<100	<20	<20	82	100	180	<25	<25	150	<120	<210	<25	<25
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	<0.8	<100	<20	<20	59	82	140	<25	<25	120	<120	<210	<25	<25
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	<0.8	<100	<20	<20	71	87	160	<25	<25	140	<120	<210	<25	<25
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	<0.8	<100	<20	<20	76	100	180	<25	<25	150	<120	<210	<25	<25
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
					pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					-	No unit	-	mg/kg	mg/kg	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					-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																					
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential															4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil											120					120	300	2,800		180	
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Acid Sulphate Soils			ES_EPA8100	EW_EPA418	TPH					CRC Care TPH Fractions						
					pH Delta (pHF-pHFox)	Reaction Rate	Reaction Rate	Total PAH (NEPM/WHO 16)	TRH C37-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					-	No unit	-	mg/kg	mg/kg	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					-10	0	0	0.05	100	10	20	45	45	50	10	25	90	100	50	10	25
NEPM 2013 HIL, Residential A																					
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				45 | 70 | 110 | 200	110 | 240 | 440
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential															4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil											120					120	300	2,800		180	
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	8	8	6	41	37	138	138	138	138	138	138	138	138	138	138	138	133
Number of Detects	8	8	6	3	0	0	10	32	50	45	0	11	34	5	21	0	7
Minimum Concentration	0.2	1	1	<0.05	<100	<10	<20	<45	<45	50	<10	<25	<90	<100	<50	<10	<25
Minimum Detect	0.2	1	1	1.5	ND	ND	22	50	47	50	ND	26	92	110	100	ND	26
Maximum Concentration	1.2	1	4	6.1	<100	<25	<50	410	510	734	<25	75	540	340	932	<25	75
Maximum Detect	1.2	1	4	6.1	ND	ND	46	410	510	734	ND	75	540	340	932	ND	75
Average Concentration *	0.61	1	1.5	0.65	50	9.9	12	47	49	82	11	24	84	58	101	11	23
Geometric Average *	0.51	1	1.3	0.41	50	9.9	11	34	38	51	11	22	66	55	77	11	22
Median Concentration *	0.55	1	1	0.4	50	10	10	25	25	53	10	25	50	50	50	10	25
Standard Deviation *	0.37	0	1.2	1.1	0	0.8	6.8	58	53	114	1.5	10	85	31	117	1.5	9.9
Geometric Standard Deviation *	1.9	1	1.8	2.4	1	1.1	1.4	1.9	1.9	2.4	1.2	1.5	1.8	1.3	1.9	1.2	1.5
95% UCL (Student's-t) *	0.859	1	2.508	0.941	50	10.04	13.17	55.52	56.86	98.43	10.93	25.02	95.74	62.78	117.9	10.93	24.58
% of Detects	100	100	100	7	0	0	7	23	36	33	0	8	25	4	15	0	5
% of Non-Detects	0	0	0	93	100	100	93	77	64	67	100	92	75	96	85	100	95

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					BTEX							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total BTEX	Xylene Total
					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**								
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	<0.5	<0.1	0.2	<0.1	<0.2	<0.1	-	<0.3
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP8 0.9-1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3

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Table 1: Soil Analytical Results

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					BTEX							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total BTEX	Xylene Total
					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
TP17												
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP18												
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP19												
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
TP20												
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-
TP21												
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
TP/HA22												
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3

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					BTEX							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total BTEX	Xylene Total
					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH07_1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH14_1.3	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	QC400	Interlab_D	20 Dec 2022	957232	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH19_0.5	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH27_1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	QA200	Field_D	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	QC200	Interlab_D	19 Dec 2022	957232	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	BH28_1.0	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	<0.1	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	<0.1	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	<0.1	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	<0.1	-	-	-	-	-	-

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					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	<0.1	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	<0.5	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
HA202	DUP1	Field_D	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
	HA202 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.6	<0.3
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					BTEX							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total BTEX	Xylene Total
					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	-	<0.3
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					BTEX							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Total BTEX	Xylene Total
					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	0.2	0.1	0.2	0.3
NEPM 2013 HIL, Residential A												
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55				40 | 60 | 95 | 170
NEPM 2013 Sch B1 Table 7 Asbestos HSLs												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil												
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses												
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500				12,000
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND												
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70				105
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-

Statistics

Number of Results	133	137	132	132	132	132	42	132
Number of Detects	1	0	1	0	0	0	0	0
Minimum Concentration	0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.2	<0.3
Minimum Detect	0.1	ND	0.2	ND	ND	ND	ND	ND
Maximum Concentration	<1	<0.2	<0.5	<1	<2	<1	<0.6	<1
Maximum Detect	0.1	ND	0.2	ND	ND	ND	ND	ND
Average Concentration *	0.2	0.052	0.059	0.061	0.12	0.061	0.29	0.16
Geometric Average *	0.16	0.051	0.054	0.054	0.11	0.054	0.28	0.15
Median Concentration *	0.25	0.05	0.05	0.05	0.1	0.05	0.3	0.15
Standard Deviation *	0.11	0.0094	0.04	0.062	0.11	0.062	0.052	0.045
Geometric Standard Deviation *	2.1	1.1	1.4	1.4	1.4	1.4	1.3	1.2
95% UCL (Student's-t) *	0.217	0.0532	0.0645	0.0703	0.133	0.0703	0.299	0.164
% of Detects	1	0	1	0	0	0	0	0
% of Non-Detects	99	100	99	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

	Metals															
	Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL	1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A	100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand															
NEPM 2013 Sch B1 Table 7 Asbestos HSLs															
PFAS NEMP 2.0 Table 2 Health Residential accessible soil															
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses															
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses															
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential															
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged	100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT															
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND															
NEPM 2013 ESL UR/POS, Coarse Soil															

Location Code	Field ID	Sample Type	Date	Lab Report Number															
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	70	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	45	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	780	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	110	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	27	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	180	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	150	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	150	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	68	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	77	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	72	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	54	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	47	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	65	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	4.7	<0.4	-	7.1	<5	7,900	12	-	-	<0.1	<5	-	-	24	-
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	7.2	<0.4	-	12	<5	-	7.1	-	-	<0.1	<5	-	-	<5	-
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	4.9	<0.4	-	5.5	<5	-	8.1	-	-	<0.1	<5	-	-	7.4	-
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	47	<0.4	-	26	<5	-	13	-	-	<0.1	<5	-	-	<5	-
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	6.3	<0.4	-	7.0	<5	-	9.3	-	-	<0.1	<5	-	-	14	-
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	5.0	<0.4	-	<5	<5	-	8.9	-	-	<0.1	<5	-	-	19	-
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	2.7	<0.4	-	<5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	3.1	<0.4	-	5.0	<5	-	8.2	-	-	<0.1	<5	-	-	21	-
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	<2	<0.4	-	<5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	3.2	<0.4	-	<5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	6.8	<0.4	-	8.7	<5	-	7.5	-	-	<0.1	<5	-	-	<5	-
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	2.7	<0.4	-	<5	<5	-	9.4	-	-	<0.1	<5	-	-	14	-
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	3.8	<0.4	-	<5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	<2	<0.4	-	<5	<5	-	12	-	-	<0.1	<5	-	-	17	-
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	2.7	<0.4	-	5.2	<5	-	15	-	-	<0.1	<5	-	-	13	-
	TP8 0.9-1	Normal	23 Apr 2024	1091634	5.8	<0.4	-	6.5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	14	<0.4	-	18	<5	-	10	-	-	<0.1	5.3	-	-	25	-
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	3.7	<0.4	-	5.6	<5	-	11	-	-	<0.1	<5	-	-	16	-
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	2.9	<0.4	-	<5	<5	-	<5	-	-	<0.1	<5	-	-	<5	-
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	9.2	<0.4	-	19	<5	-	9.7	-	-	<0.1	<5	-	-	6.4	-
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	4.6	<0.4	-	7.0	<5	-	14	-	-	<0.1	<5	-	-	21	-
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	8.3	<0.4	-	15	<5	-	16	-	-	<0.1	<5	-	-	19	-
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	16	<0.4	-	19	<5	-	7.5	-	-	<0.1	<5	-	-	8.9	-
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	4.5	<0.4	-	7.8	<5	-	16	-	-	<0.1	<5	-	-	21	-
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	6.4	<0.4	-	8.7	<5	13,000	5.2	-	-	<0.1	<5	-	-	<5	-
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	3.0	<0.4	-	<5	<5	-	12	-	-	<0.1	<5	-	-	14	-
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	2.7	<0.4	-	<5	<5	-	11	-	-	<0.1	<5	-	-	19	-
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	5.9	<0.4	-	9.5	<5	-	19	-	-	<0.1	<5	-	-	29	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Metals															
					Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL					1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A					100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged					100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
TP17																			
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	6.2	<0.4	-	13	6.5	-	29	-	-	<0.1	<5	-	-	39	-
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	17	<0.4	-	37	<5	-	23	-	-	<0.1	<5	-	-	<5	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																			
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	5.5	<0.4	-	11	<5	-	86	-	-	<0.1	<5	-	-	30	-
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	18	<0.4	-	21	<5	-	6.8	-	-	<0.1	<5	-	-	<5	-
TP19																			
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<2	<0.4	-	33	22	-	<5	-	-	<0.1	23	-	-	67	-
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	7.0	<0.4	-	9.0	8.2	-	44	-	-	<0.1	<5	-	-	110	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	6.1	<0.4	-	13	<5	-	65	-	-	<0.1	<5	-	-	49	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<2	<0.4	-	37	27	-	<5	-	-	<0.1	25	-	-	56	-
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	1	<0.3	-	38	25	-	3	-	-	<0.05	23	-	-	61	-
TP20																			
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<2	<0.4	-	29	18	-	<5	-	-	<0.1	19	-	-	48	-
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																			
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	7.4	<0.4	-	14	5.9	-	47	-	-	<0.1	5.5	-	-	69	-
TP/HA22																			
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	4.8	<0.4	-	11	6.9	-	8.4	-	-	<0.1	<5	-	-	30	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	20	<0.4	-	22	<5	-	10	-	-	<0.1	<5	-	-	6.0	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	7.5	<0.4	-	13	<5	-	8.8	-	-	<0.1	<5	-	-	21	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	15	<0.3	-	15	4.5	-	10	-	-	<0.05	3.5	-	-	25	-

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					Metals															
					Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL					1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A					100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged					100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	7	<0.3	130	10	<0.5	24,000	8	-	74	<0.05	1.1	140	15	3.2	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	3	<0.3	-	6.0	0.5	-	6	-	-	<0.05	1.5	-	-	3.2	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	4	<0.3	-	9.2	0.9	-	6	-	-	<0.05	0.8	-	-	5.5	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	10	<0.3	-	21	<0.5	-	10	-	-	<0.05	0.9	-	-	7.9	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	270	-	-	29,000	-	-	480	-	-	240	55	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	6	<0.3	-	7.3	4.5	-	16	-	-	<0.05	2.5	-	-	26	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	10	<0.3	-	15	1.6	-	10	-	-	<0.05	2.5	-	-	11	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	11	<0.3	-	16	<0.5	-	7	-	-	<0.05	1.6	-	-	7.9	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	5	<0.3	-	17	1.0	-	6	-	-	<0.05	0.6	-	-	8.2	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	8	<0.3	-	21	0.9	-	10	-	-	<0.05	1.6	-	-	8.6	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	9	<0.3	-	17	5.4	-	26	-	-	<0.05	4.8	-	-	71	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	5	<0.3	-	4.3	1.3	-	16	-	-	<0.05	1.0	-	-	15	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	9	<0.3	-	14	12	-	380	-	-	0.06	7.7	-	-	230	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	8	<0.3	-	7.2	0.9	-	17	-	-	0.06	<0.5	-	-	9.2	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	47	-	-	32,000	-	-	300	-	-	140	120	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	5	0.3	-	11	19	-	380	-	-	0.06	11	-	-	260	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	7	0.4	-	14	16	-	490	-	-	0.05	11	-	-	290	-
	QC400	Interlab_D	20 Dec 2022	957232	6.1	<0.4	-	13	19	-	320	-	-	<0.1	10	-	-	250	-
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	5	<0.3	-	11	6.3	-	18	-	-	<0.05	5.3	-	-	67	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	6	<0.3	33	22	<0.5	6,200	4	-	310	<0.05	<0.5	130	140	2.3	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	6	<0.3	-	12	3.8	-	42	-	-	<0.05	2.4	-	-	39	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	6	<0.3	-	10	6.0	-	15	-	-	0.06	5.9	-	-	53	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	12	<0.3	-	19	2.2	-	10	-	-	<0.05	7.0	-	-	39	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	8	<0.3	-	13	<0.5	-	6	-	-	<0.05	<0.5	-	-	2.8	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	9	<0.3	-	25	<0.5	-	5	-	-	<0.05	0.9	-	-	7.9	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	5	<0.3	-	10	1.7	-	10	-	-	<0.05	2.1	-	-	10	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	4	<0.3	-	6.9	3.1	-	20	-	-	<0.05	1.8	-	-	19	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	6	<0.3	-	13	2.6	-	9	-	-	<0.05	2.4	-	-	15	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	5	<0.3	-	5.8	2.3	-	9	-	-	<0.05	1.8	-	-	14	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	2	<0.3	-	2.8	2.5	-	7	-	-	<0.05	1.2	-	-	18	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	1	<0.3	-	4.1	2.2	-	10	-	-	<0.05	1.4	-	-	5.2	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	4	<0.3	-	8.1	<0.5	-	6	-	-	<0.05	2.0	-	-	2.0	-
	QA200	Field_D	19 Dec 2022	SE241126	1	<0.3	-	4.2	2.0	-	11	-	-	<0.05	1.5	-	-	6.0	-
	QC200	Interlab_D	19 Dec 2022	957232	<2	<0.4	-	<5	<5	-	11	-	-	<0.1	<5	-	-	<5	-
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	3	<0.3	-	3.8	2.3	-	9	-	-	<0.05	1.4	-	-	14	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	10	<0.3	-	4.6	<0.5	-	6	-	-	<0.05	<0.5	-	-	2.3	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	19	-	-	-	-	-	-	44	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	970	-	-	-	-	-	-	870	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	910	-	-	-	-	-	-	880	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	2,500	-	-	-	-	-	-	1,900	-
				SE242288A	-	-	-	-	-	-	-	2,100	-	-	-	-	-	-	19,000
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	1,200	-	-	-	-	-	-	1,000	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	390	-	-	-	-	-	-	910	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	460	-	-	-	-	-	-	960	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	140	-	-	-	-	-	-	180	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	190	-	-	-	-	-	-	170	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	170	-	-	-	-	-	-	190	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	280	-	-	-	-	-	-	210	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	160	-	-	-	-	-	-	180	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	310	-	-	-	-	-	-	220	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	480	-	-	-	-	-	-	370	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	310	-	-	-	-	-	-	200	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	350	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	200	-	-	-	-	-	-	140	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	530	-	-	-	-	-	-	310	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	360	-	-	-	-	-	-	310	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	300	-	-	-	-	-	-	210	-

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Detailed Site investigation

					Metals															
					Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL					1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A					100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged					100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	350	-	-	-	-	-	-	130	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	290	-	-	-	-	-	-	190	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	420	-	-	-	-	-	-	240	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	44	-	-	-	-	-	-	190	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	21	-	-	-	-	-	-	82	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	19	-	-	-	-	-	-	58	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	110	-	-	-	-	-	-	430	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	180	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	98	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	19	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	31	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	25	-	-	-	-	-	-	90	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	17	-	-	-	-	-	-	22	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	9	-	-	-	-	-	-	15	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	10	-	-	-	-	-	-	12	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	32	-	-	-	-	-	-	32	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	29	-	-	-	-	-	-	77	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	52	-	-	-	-	-	-	72	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	31	-	-	-	-	-	-	63	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	340	-	-	-	-	-	-	280	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	190	-	-	-	-	-	-	230	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	460	-	-	-	-	-	-	200	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	460	-	-	-	-	-	-	200	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	97	-	-	-	-	-	-	100	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	50	-	-	-	-	-	-	95	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	96	-	-	-	-	-	-	160	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	81	-	-	-	-	-	-	160	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	71	-	-	-	-	-	-	140	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	270	-	-	-	-	-	-	290	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	120	-	-	-	-	-	-	69	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	73	-	-	-	-	-	-	230	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	240	-	-	-	-	-	-	170	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	260	-	-	-	-	-	-	180	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	280	-	-	-	-	-	-	550	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	75	-	-	-	-	-	-	92	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	94	-	-	-	-	-	-	130	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	83	-	-	-	-	-	-	84	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	120	-	-	-	-	-	-	160	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	110	-	-	-	-	-	-	160	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	47	-	-	-	-	-	-	77	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	17	-	-	-	-	-	-	42	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	10	-	-	-	-	-	-	16	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	91	-	-	-	-	-	-	140	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	200	-	-	-	-	-	-	220	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	1,600	-	-	-	-	-	-	830	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	550	-	-	-	-	-	-	390	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	260	-	-	-	-	-	-	190	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	140	-	-	-	-	-	-	200	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	13	-	-	-	-	-	-	27	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	9	-	-	-	-	-	-	34	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	38	-	-	-	8	-	-	46	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	6	-	-	-	-	-	-	21	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	24	-	-	-	-	-	-	24	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	164	-	-	-	-	-	-	137	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	235	-	-	-	-	-	-	322	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	51	-	-	-	-	-	-	64	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	102	-	-	-	-	-	-	111	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	391	-	-	-	-	-	-	112	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	249	-	-	-	-	-	-	164	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	152	-	-	-	-	-	-	80	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	181	-	-	-	-	-	-	147	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	55	-	-	-	-	-	-	43	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	16	-	-	-	-	-	-	12	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	36	-	-	-	-	-	-	34	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	87	-	-	-	-	-	-	55	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Metals															
					Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL					1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A					100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged					100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	39	-	-	-	-	-	-	36	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	14	-	-	-	-	-	-	20	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	34	-	-	-	-	-	-	57	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	12	-	-	-	-	-	-	31	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	9.9	-	-	-	-	-	-	610	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	9	-	-	-	-	-	-	410	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	5.6	-	-	-	-	-	-	290	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	34	-	-	-	-	-	-	180	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	8.9	-	-	-	-	-	-	570	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	33	-	-	-	-	-	-	390	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	240	-	-	-	-	-	-	350	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	210	-	-	-	-	-	-	340	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	280	-	-	-	-	-	-	410	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	19	-	-	-	-	-	-	100	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	19	-	-	-	-	-	-	87	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	7.9	-	-	-	-	-	-	<5	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	26	-	-	-	-	-	-	120	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	15	-	-	-	-	-	-	16	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	48	-	-	-	-	-	-	250	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	410	-	-	-	-	-	-	840	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	160	-	-	-	-	-	-	910	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	150	-	-	-	-	-	-	800	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	360	-	-	-	-	-	-	420	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	42	-	-	-	-	-	-	180	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	37	-	-	-	-	-	-	340	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	140	-	-	-	-	-	-	250	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	340	-	-	-	-	-	-	230	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	340	-	-	-	-	-	-	370	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	150	-	-	-	-	-	-	490	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	100	-	-	-	-	-	-	180	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	53	-	-	-	-	-	-	380	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	67	-	-	-	-	-	-	110	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	48	-	-	-	-	-	-	110	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	8.6	-	-	-	-	-	-	170	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	17	-	-	-	-	-	-	54	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	310	-	-	-	-	-	-	250	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	420	-	-	-	-	-	-	200	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	13	-	-	-	-	-	-	26	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	150	-	-	-	-	-	-	360	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	270	-	-	-	-	-	-	260	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	92	-	-	-	-	-	-	980	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	240	-	-	-	-	-	-	310	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	100	-	-	-	-	-	-	250	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	18	<0.4	-	20	<5	-	28	-	-	<0.1	<5	-	-	70	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	220	-	-	-	-	-	-	190	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	170	-	-	-	-	-	-	120	-

Stantec

Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Metals															
					Arsenic	Cadmium	Calcium (filtered)	Chromium (III+VI)	Copper	Iron	Lead	Lead (filtered)	Magnesium (filtered)	Mercury	Nickel	Potassium (filtered)	Sodium (filtered)	Zinc	Zinc (filtered)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L
EQL					1	0.3	2	0.5	0.5	20	1	10	2	0.05	0.5	2	2	1	10
NEPM 2013 HIL, Residential A					100	20			6,000		300			40	400			7,400	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged					100			190	60		1,100				30			70	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	260	-	-	-	-	-	-	230	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	9.8	-	-	-	-	-	-	14	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	54	-	-	-	-	-	-	170	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	170	-	-	-	-	-	-	150	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	550	-	-	-	-	-	-	170	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	360	-	-	-	-	-	-	130	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	500	-	-	-	-	-	-	200	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	220	-	-	-	-	-	-	140	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	300	-	-	-	-	-	-	250	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	360	-	-	-	-	-	-	320	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	100	-	-	-	-	-	-	91	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	270	-	-	-	-	-	-	310	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	83	-	-	-	-	-	-	320	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	660	-	-	-	-	-	-	450	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	200	-	-	-	-	-	-	160	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	15	-	-	-	-	-	-	79	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	16	-	-	-	-	-	-	38	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	76	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	64	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	55	-	-	-	-	-	-	33	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	140	-	-	-	-	-	-	150	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	14	-	-	-	-	-	-	35	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	330	-	-	-	-	-	-	230	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	220	-	-	-	-	-	-	250	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	920	-	-	-	-	-	-	590	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	73	-	-	-	-	-	-	85	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	400	-	-	-	-	-	-	260	-

Statistics

Number of Results					134	134	4	134	134	6	310	1	4	134	135	4	4	287	1
Number of Detects					109	8	4	98	69	6	284	1	4	11	55	4	4	263	1
Minimum Concentration					1	0.3	33	<1	0.5	6,200	3	2,100	74	0.05	<0.5	130	15	2	19,000
Minimum Detect					1	0.3	33	2.8	0.5	6,200	3	2,100	74	0.05	0.6	130	15	2	19,000
Maximum Concentration					69	1.2	270	85	300	32,000	2,500	2,100	480	0.2	25	240	140	1,900	19,000
Maximum Detect					69	1.2	270	85	300	32,000	2,500	2,100	480	0.2	25	240	140	1,900	19,000
Average Concentration *					6	0.22	120	11	21	18,683	142		291	0.048	4.1	162	82	165	
Geometric Average *					4	0.2	86	7.5	5.2	15,558	40	2,100	240	0.045	2.9	157	61	59	19,000
Median Concentration *					4.6	0.2	88.5	8.7	2.5	18,500	32	2,100	305	0.05	2.5	140	87.5	77	19,000
Standard Deviation *					7.6	0.13	109	10	46	11,104	270		167	0.02	4.3	52	58	236	
Geometric Standard Deviation *					2.4	1.4	2.6	2.4	5	2	5.4		2.3	1.4	2.3	1.3	2.8	5.4	
95% UCL (Student's-t) *					7.081	0.235	248	12.22	28.08	27,818	167.2		487	0.0507	4.716	223.5	150.5	187.8	
% of Detects					81	6	100	73	51	100	92	100	100	8	41	100	100	92	100
% of Non-Detects					19	94	0	27	49	0	8	0	0	92	59	0	0	8	0

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

	pH		Asbestos	Organic			PAH									
	pH (Fox)	pH (F)	Asbestos Reported Result	Sum of US EPA PFAS (PFOS + PFOA)*	TOC	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
	pH Unit	pH Unit	Comment	UG/KG	%	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Residential A																
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand							3									
NEPM 2013 Sch B1 Table 7 Asbestos HSLs			<0.01 % w/w ACM in soil | <0.001 % w/w FA/AF in Soil | No visible asbestos at surface													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential							1,400									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged							170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil																
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**												
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	3.0	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	0.3	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					pH		Asbestos	Organic			PAH									
					pH (Fox)	pH (F)	Asbestos Reported Result	Sum of US EPA PFAS (PFOS + PFOA)*	TOC	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
					pH Unit	pH Unit	Comment	UG/KG	%	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Residential A																				
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand											3									
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							<0.01 % w/w ACM in soil | <0.001 % w/w FA/AF in Soil | No visible asbestos at surface													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential											1,400									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged											170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
TP17	TP17 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP17 0.5-0.6	Normal	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP17 1-1.1	Normal	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP18	TP18 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP18 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP19	TP19 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP19 0.3-0.4	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP19 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP19 0.8-0.9	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	Field_D	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip2	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TP20	TP20 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP20 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21	TP21 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	<5	-	<5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP/HA22	TP/HA22 0-0.1	Normal	24 Apr 2024	1091634	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP/HA22 0.2-0.3	Normal	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	DUP3	Field_D	24 Apr 2024	1091634	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	Trip3	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					pH		Asbestos	Organic			PAH									
					pH (Fox)	pH (F)	Asbestos Reported Result	Sum of US EPA PFAS (PFOS + PFOA)*	TOC	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
					pH Unit	pH Unit	Comment	UG/KG	%	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Residential A																				
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand											3									
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							<0.01 % w/w ACM in soil | <0.001 % w/w FA/AF in Soil | No visible asbestos at surface													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential											1,400									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged											170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	0.93	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	4.7	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	4.3	4.7	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH05_1.5	Normal	19 Dec 2022	SE241126	4.1	4.8	-	-	0.72	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	4.0	5.3	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.2	0.2
	BH14_1.3	Normal	20 Dec 2022	SE241126	4.8	5.1	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	0.12	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	0.2	0.4	0.5	<0.1	<0.1	<0.1	0.8	0.1	0.7	0.7
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	4.2	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	-	-	-	-	-	0.1	0.2	0.5	<0.1	<0.1	<0.1	0.8	0.1	0.7	0.6
	QC400	Interlab_D	20 Dec 2022	957232	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	0.08	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH19_0.5	Normal	21 Dec 2022	SE241126	6.7	7.7	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.1
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	QA200	Field_D	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
	QC200	Interlab_D	19 Dec 2022	957232	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	BH28_1.0	Normal	19 Dec 2022	SE241126	4.3	4.7	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Detailed Site investigation

					pH		Asbestos	Organic			PAH									
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EQL					0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
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NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand											3									
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged											170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					pH		Asbestos	Organic			PAH									
					pH (Fox)	pH (F)	Asbestos Reported Result	Sum of US EPA PFAS (PFOS + PFOA)*	TOC	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
					pH Unit	pH Unit	Comment	UG/KG	%	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Residential A																				
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand											3									
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							<0.01 % w/w ACM in soil | <0.001 % w/w FA/AF in Soil | No visible asbestos at surface													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential											1,400									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged											170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	No asbestos detected at the reporting limit of 0.001% w/w. Organic fibre detected. No trace asbestos detected.	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					pH		Asbestos	Organic			PAH									
					pH (Fox)	pH (F)	Asbestos Reported Result	Sum of US EPA PFAS (PFOS + PFOA)*	TOC	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	1-Methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene
					pH Unit	pH Unit	Comment	UG/KG	%	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0	0		5	0.05	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Residential A																				
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand											3									
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							<0.01 % w/w ACM in soil | <0.001 % w/w FA/AF in Soil | No visible asbestos at surface													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential											1,400									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged											170									
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	14	14	68	30	6	30	132	39	39	132	132	132	132	132	132	132
Number of Detects	14	14	0	0	6	0	2	2	2	0	0	0	3	2	10	7
Minimum Concentration	3.9	4.5	-	<5	0.08	<5	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.1
Minimum Detect	3.9	4.5	-	ND	0.08	ND	0.1	0.2	0.5	ND	ND	ND	0.1	0.1	0.1	0.1
Maximum Concentration	8.3	8.1	-	<5	3	<5	<0.5	0.4	0.5	<0.5	<0.5	<0.5	0.8	<0.5	0.8	0.8
Maximum Detect	8.3	8.1	-	ND	3	ND	0.2	0.4	0.5	ND	ND	ND	0.8	0.1	0.8	0.8
Average Concentration *	4.8	5.5	-	2.5	0.86	2.5	0.19	0.063	0.073	0.19	0.19	0.19	0.2	0.19	0.21	0.2
Geometric Average *	4.7	5.4	-	2.5	0.42	2.5	0.15	0.055	0.056	0.15	0.15	0.15	0.16	0.15	0.17	0.16
Median Concentration *	4.3	5.05	-	2.5	0.51	2.5	0.25	0.05	0.05	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation *	1.2	1.1	-	0	1.1	0	0.092	0.06	0.1	0.093	0.093	0.093	0.12	0.092	0.12	0.12
Geometric Standard Deviation *	1.2	1.2	-	1	3.9	1	2.1	1.5	1.7	2.1	2.1	2.1	2.1	2.1	2.1	2.1
95% UCL (Student's-t) *	5.388	6.043	-	2.5	1.765	2.5	0.203	0.0791	0.1	0.201	0.201	0.201	0.217	0.202	0.227	0.221
% of Detects	100	100	100	0	100	0	2	5	5	0	0	0	2	2	8	5
% of Non-Detects	0	0	0	100	0	100	98	95	95	100	100	100	98	98	92	95

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**												
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5

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Table 1: Soil Analytical Results

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Site: Gillieston Public School
Detailed Site Investigation

					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
TP17																
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP18																
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP19																
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
TP20																
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-
TP21																
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
TP/HA22																
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8

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Table 1: Soil Analytical Results

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					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
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CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH07_1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	0.2	0.2	<0.1	0.2	0.1	0.1	<0.1	0.1	<0.2	0.2	<0.3	1.5
	BH14_1.3	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	0.5	0.5	0.2	0.7	0.6	0.5	0.1	0.5	0.9	0.9	0.9	6.9
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	0.4	0.4	0.2	0.5	0.4	0.2	<0.1	0.2	0.5	0.6	0.6	5.3
	QC400	Interlab_D	20 Dec 2022	957232	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	1.2
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH19_0.5	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH27_1.5	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	QA200	Field_D	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	QC200	Interlab_D	19 Dec 2022	957232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	BH28_1.0	Normal	19 Dec 2022	SE241126	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
HA202	DUP1	Field_D	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
	HA202 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.3	<0.8
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					PAH											
					Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (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
EQL					0.1	0.1	0.1	0.1	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Residential A													3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil									0.7							
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	132	132	130	130	132	132	132	132	132	132	132	130
Number of Detects	4	5	2	5	4	3	1	3	3	94	93	5
Minimum Concentration	<0.1	<0.1	<0.1	0.1	<0.05	0.1	0.1	0.1	<0.2	0.2	<0.3	<0.5
Minimum Detect	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.5	0.2	0.6	1.2
Maximum Concentration	0.7	0.6	<0.5	1.1	1.2	0.5	<0.5	0.5	1.4	1.7	2	6.9
Maximum Detect	0.7	0.6	0.2	1.1	1.2	0.5	0.1	0.5	1.4	1.7	2	6.9
Average Concentration *	0.2	0.2	0.19	0.21	0.2	0.19	0.19	0.19	0.22	0.47	0.89	0.44
Geometric Average *	0.16	0.16	0.16	0.16	0.16	0.16	0.15	0.16	0.2	0.36	0.65	0.31
Median Concentration *	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25
Standard Deviation *	0.11	0.11	0.09	0.13	0.13	0.095	0.092	0.095	0.14	0.25	0.49	0.85
Geometric Standard Deviation *	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	1.6	2.3	2.6	1.7
95% UCL (Student's-t) *	0.214	0.216	0.205	0.225	0.221	0.206	0.202	0.206	0.244	0.502	0.961	0.56
% of Detects	3	4	2	4	3	2	1	2	2	71	70	4
% of Non-Detects	97	96	98	96	97	98	99	98	98	29	30	96

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																	
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
TP17																					
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.5	<1	<5	<20	<1	<5	<1	1.9	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																					
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19																					
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.5	<2	<0.5	<0.5	-	-	<2	<1	<1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-
TP20																					
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																					
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10
TP/HA22																					
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC400	Interlab_D	20 Dec 2022	957232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	19 Dec 2022	957232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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					0.5	2	0.2	0.5	5	20	1	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	10
NEPM 2013 HIL, Residential A													400	3,000						100	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																					
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																					
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																					
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																					
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																					
NEPM 2013 ESL UR/POS, Coarse Soil																					
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	25	25	25	25	24	24	25	25	25	25	25	25	25	25	25	25	24
Number of Detects	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Minimum Concentration	<0.5	<2	<0.2	<0.5	<5	<20	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.5	<5	<0.5	<1	<5	<20	<2	<5	<1.5	1.9	<1	<1	<0.5	<0.5	<0.5	<1	<10
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	0.25	2.4	0.11	0.49	2.5	10	0.52	2.4	0.28	0.32	0.49	0.49	0.25	0.25	0.25	0.49	5
Geometric Average *	0.25	2.4	0.11	0.49	2.5	10	0.51	2.3	0.27	0.27	0.49	0.49	0.25	0.25	0.25	0.49	5
Median Concentration *	0.25	2.5	0.1	0.5	2.5	10	0.5	2.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	5
Standard Deviation *	0	0.3	0.042	0.05	0	0	0.1	0.4	0.11	0.33	0.05	0.05	0	0	0	0.05	0
Geometric Standard Deviation *	1	1.2	1.3	1.1	1	1	1.1	1.4	1.3	1.5	1.1	1.1	1	1	1	1.1	1
95% UCL (Student's-t) *	0.25	2.543	0.126	0.507	2.5	10	0.554	2.557	0.318	0.429	0.507	0.507	0.25	0.25	0.25	0.507	5
% of Detects	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	96	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

	Organochlorine Pesticides																
	Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	gamma-Chlordane	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
	mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A							6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged															180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil																

Location Code	Field ID	Sample Type	Date	Lab Report Number															
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP8 0.9-1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides																
					Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	gamma-Chlordane	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A											6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
TP17																				
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	<0.5	<0.5	<0.5	<0.5
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																				
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19																				
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
TP20																				
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																				
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
TP/HA22																				
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Site: Gillieston Public School
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					Organochlorine Pesticides															
					Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	gamma-Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A											6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
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CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	QC400	Interlab_D	20 Dec 2022	957232	<1	<1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<1	-	-	-	<0.5	<0.5	<0.5	<0.5
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	QC200	Interlab_D	19 Dec 2022	957232	<0.1	<0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	-	-	-	<0.05	<0.05	<0.05	<0.05
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	<1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Stantec

Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organochlorine Pesticides															
					Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	gamma-Chlordane	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A											6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides															
					Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	gamma-Chlordane	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A											6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organochlorine Pesticides															
					Other organochlorine pesticides IWRG621	Organochlorine pesticides IWRG621	2,4-DDT	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	gamma-Chlordane	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Residential A											6		50							240
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			180	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	10	71	22	79	79	79	52	79	55	27	22	5	79	79	79	54
Number of Detects	4	4	0	1	0	0	4	0	4	0	0	0	0	1	1	1
Minimum Concentration	<0.1	<0.1	<0.1	<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
Minimum Detect	3.3	3.3	ND	0.07	ND	ND	0.16	ND	1.3	ND	ND	ND	ND	0.07	0.06	0.2
Maximum Concentration	17.79	17.79	<0.1	<0.5	<0.5	<0.5	1.83	<0.5	7.7	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
Maximum Detect	17.79	17.79	ND	0.07	ND	ND	1.83	ND	7.7	ND	ND	ND	ND	0.07	0.06	0.2
Average Concentration *	4.4	0.88	0.05	0.082	0.081	0.081	0.16	0.081	0.49	0.047	0.05	0.035	0.081	0.082	0.084	0.096
Geometric Average *	1.2	0.22	0.05	0.051	0.051	0.051	0.065	0.051	0.13	0.046	0.05	0.033	0.051	0.051	0.054	0.053
Median Concentration *	0.5	0.5	0.05	0.05	0.05	0.05	0.025	0.05	0.05	0.05	0.05	0.025	0.05	0.05	0.05	0.025
Standard Deviation *	6.6	2.8	0	0.089	0.09	0.09	0.28	0.09	1.3	0.008	0	0.014	0.09	0.089	0.089	0.1
Geometric Standard Deviation *	6.4	4.2	1	2.4	2.4	2.4	3.5	2.4	4.2	1.2	1	1.5	2.4	2.4	2.4	2.9
95% UCL (Student's-t) *	8.279	1.434	0.05	0.0983	0.0978	0.0978	0.223	0.0978	0.782	0.0499	0.05	0.0481	0.0978	0.0983	0.101	0.119
% of Detects	40	6	0	1	0	0	8	0	7	0	0	0	0	1	1	2
% of Non-Detects	60	94	100	99	100	100	92	100	93	100	100	100	100	99	99	98

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

	Organochlorine Pesticides															
	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
	mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A					10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																
NEPM 2013 ESL UR/POS, Coarse Soil																

Location Code	Field ID	Sample Type	Date	Lab Report Number															
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP8 0.9-1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides															
					Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A									10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
TP17																				
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<10	-
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																				
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19																				
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
TP20																				
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																				
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
TP/HA22																				
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides															
					Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A									10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
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CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	0.6	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	0.7	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	QC400	Interlab_D	20 Dec 2022	957232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	<10	-
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	QC200	Interlab_D	19 Dec 2022	957232	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	<0.5	-
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides															
					Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A									10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organochlorine Pesticides															
					Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A									10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organochlorine Pesticides															
					Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	o,p-DDD	o,p'-DDE	Toxaphene	trans-Nonachlor
					mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.1	0.1	0.5	0.1
NEPM 2013 HIL, Residential A									10				6		10	300			20	
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																				
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																				
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																				
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																				
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																				
NEPM 2013 ESL UR/POS, Coarse Soil																				
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	79	79	79	79	79	79	77	79	79	79	79	79	22	22	52	22
Number of Detects	6	1	1	1	0	1	1	0	4	4	0	1	0	0	0	0
Minimum Concentration	<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	<0.1	<0.5	<0.1
Minimum Detect	0.16	0.06	0.09	0.08	ND	0.09	0.08	ND	1.4	0.6	ND	0.09	ND	ND	ND	ND
Maximum Concentration	1.83	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.2	1.7	<0.5	<0.5	<0.1	<0.1	<10	<0.1
Maximum Detect	1.83	0.06	0.09	0.08	ND	0.09	0.08	ND	9.2	1.7	ND	0.09	ND	ND	ND	ND
Average Concentration *	0.15	0.095	0.096	0.082	0.095	0.082	0.083	0.081	0.33	0.13	0.081	0.085	0.05	0.05	1.8	0.05
Geometric Average *	0.076	0.062	0.062	0.051	0.061	0.051	0.051	0.051	0.063	0.059	0.051	0.054	0.05	0.05	0.67	0.05
Median Concentration *	0.1	0.06	0.09	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.25	0.05
Standard Deviation *	0.25	0.087	0.087	0.089	0.088	0.089	0.091	0.09	1.3	0.26	0.09	0.089	0	0	2.2	0
Geometric Standard Deviation *	3.1	2.6	2.6	2.4	2.6	2.4	2.5	2.4	3.6	3	2.4	2.4	1	1	4.1	1
95% UCL (Student's-t) *	0.197	0.112	0.112	0.0985	0.111	0.0986	0.0997	0.0978	0.577	0.183	0.0978	0.101	0.05	0.05	2.326	0.05
% of Detects	8	1	1	1	0	1	1	0	5	5	0	1	0	0	0	0
% of Non-Detects	92	99	99	99	100	99	99	100	95	95	100	99	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organophosphorous Pesticides																	
					Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																		
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organophosphorous Pesticides																	
					Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
TP17																						
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	-	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																						
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19																						
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
TP20																						
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																						
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP/HA22																						
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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					Organophosphorous Pesticides																	
					Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	QC400	Interlab_D	20 Dec 2022	957232	<0.5	<0.5	-	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	QC200	Interlab_D	19 Dec 2022	957232	<0.2	<0.2	-	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.2	-	<0.2	-	-	-	-	<0.5	<0.5	<0.5	-	<0.2	-	<0.2	-	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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					Organophosphorous Pesticides																	
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					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organophosphorous Pesticides																	
					Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organophosphorous Pesticides																	
					Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.05	0.05	0.05	0.1	0.05	0.2	0.1	0.2	0.05
NEPM 2013 HIL, Residential A									160													
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	79	52	27	55	79	57	54	52	52	79	79	79	54	79	52	76	52	57
Number of Detects	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.1	<0.05	<0.2	<0.1	<0.2	<0.05
Minimum Detect	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	0.13	0.15	0.088	0.14	0.13	0.14	1.4	0.15	0.15	0.17	0.17	0.17	0.15	0.13	0.15	0.13	0.15	0.14
Geometric Average *	0.11	0.13	0.081	0.12	0.11	0.12	1.2	0.13	0.13	0.15	0.15	0.15	0.13	0.11	0.13	0.12	0.13	0.12
Median Concentration *	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Standard Deviation *	0.067	0.071	0.026	0.075	0.066	0.075	0.75	0.071	0.071	0.081	0.081	0.081	0.072	0.066	0.071	0.064	0.071	0.075
Geometric Standard Deviation *	1.7	1.5	1.6	1.8	1.7	1.8	2.1	1.5	1.5	1.8	1.8	1.8	1.6	1.7	1.5	1.5	1.5	1.8
95% UCL (Student's-t) *	0.142	0.166	0.0966	0.159	0.141	0.156	1.608	0.166	0.166	0.185	0.185	0.185	0.162	0.141	0.166	0.144	0.166	0.156
% of Detects	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	99	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

						Organophosphorous Pesticides										
						Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
						mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																			
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																			
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																			
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																			
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																			
NEPM 2013 ESL UR/POS, Coarse Soil																			
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**															
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organophosphorous Pesticides														
					Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
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CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		
TP17	**TP17 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	<0.5	<0.5	-	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18	**TP18 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19	**TP19 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
TP20	**TP20 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21	**TP21 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP/HA22	**TP/HA22 0-0.1**	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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					Organophosphorous Pesticides													
					Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																		
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	QC400	Interlab_D	20 Dec 2022	957232	<0.5	<0.5	-	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	19 Dec 2022	957232	<0.2	<0.2	-	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.2	-	<0.5	-	-	-	-	-	-	-	-	-	-	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organophosphorous Pesticides													
					Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																		
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Organophosphorous Pesticides													
					Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																		
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organophosphorous Pesticides													
					Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	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	0.2	0.1	0.1	0.1	0.2	0.2	2	0.1	0.2	0.1	0.2	0.2	0.2
NEPM 2013 HIL, Residential A																		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																		
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	79	52	24	57	54	55	52	52	54	52	54	52	52	52
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.05	<0.2	<0.1	<0.1	<0.1	<0.2	<0.2	<2	<0.1	<0.2	<0.1	<0.2	<0.2	<0.2
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	0.13	0.15	0.23	0.14	0.15	1.4	0.15	1.5	0.15	0.15	0.15	0.15	0.15	0.15
Geometric Average *	0.11	0.13	0.22	0.13	0.13	1.2	0.13	1.3	0.13	0.13	0.13	0.13	0.13	0.13
Median Concentration *	0.1	0.1	0.25	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1
Standard Deviation *	0.066	0.071	0.056	0.071	0.072	0.76	0.071	0.71	0.072	0.071	0.072	0.071	0.071	0.071
Geometric Standard Deviation *	1.7	1.5	1.6	1.6	1.6	2.1	1.5	1.5	1.6	1.5	1.6	1.5	1.5	1.5
95% UCL (Student's-t) *	0.141	0.166	0.253	0.159	0.162	1.586	0.166	1.655	0.162	0.166	0.162	0.166	0.166	0.166
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Herbicides	Insecticides	Pesticides						
					Dinoseb	Tokuthion	Scheduled chemicals (total, NSW Waste 2014)	Moderately harmful pesticides (total)	Fenamiphos	Isodrin	Mirex	Parathion	Pirimiphos-methyl
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
NEPM 2013 Sch B1 Table 7 Asbestos HSLs													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil													
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses													
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**									
AHA101	**AHA101 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA102	**AHA102 0-0.01**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA103	**AHA103 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA104	**AHA104 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA105	**AHA105 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA106	**AHA106 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA107	**AHA107 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	DUP1	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	Trip1	**Interlab_D**	**22 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-
AHA108	**AHA108 0.02-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA109	**AHA109 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA110	**AHA110 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	Trip4	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-
	DUP4	**Field_D**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA111	**AHA111 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA112	**AHA112 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
AHA113	**AHA113 0-0.1**	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	**Normal**	**22 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP1	**TP1 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP1 0.6-0.7	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP2	**TP2 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP2 0.2-0.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP3	**TP3 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP4	**TP4 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP4 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP5	**TP5 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP5 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP6	**TP6 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP6 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP7	**TP7 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP8	**TP8 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP8 0.9-1	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP9	**TP9 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP10	**TP10 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP10 0.4-0.5	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP11	**TP11 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP12	**TP12 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP12 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP13	**TP13 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP13 0.5-0.6	**Normal**	**23 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP14	**TP14 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP15	**TP15 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP16	**TP16 0-0.1**	**Normal**	**23 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2

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Table 1: Soil Analytical Results

Project: 304100928
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Detailed Site Investigation

					Herbicides	Insecticides	Pesticides						
					Dinoseb	Tokuthion	Scheduled chemicals (total, NSW Waste 2014)	Moderately harmful pesticides (total)	Fenamiphos	Isodrin	Mirex	Parathion	Pirimiphos-methyl
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
NEPM 2013 Sch B1 Table 7 Asbestos HSLs													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil													
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses													
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
TP17													
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<20	<0.5	-	-	-	-	-	<0.5	<0.5
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP18													
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP19													
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	<0.1	<0.1	<0.2	-
TP20													
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
TP21													
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<20	<0.2	-	-	-	-	-	<0.2	<0.2
TP/HA22													
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-

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					Herbicides	Insecticides	Pesticides						
					Dinoseb	Tokuthion	Scheduled chemicals (total, NSW Waste 2014)	Moderately harmful pesticides (total)	Fenamiphos	Isodrin	Mirex	Parathion	Pirimiphos-methyl
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
NEPM 2013 Sch B1 Table 7 Asbestos HSLs													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil													
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses													
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	-	0.6	0	-	<0.1	<0.1	<0.2	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	-	0.7	0	-	<0.1	<0.1	<0.2	-
	QC400	Interlab_D	20 Dec 2022	957232	-	<0.5	0	0	-	-	-	<0.5	<0.5
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	QC200	Interlab_D	19 Dec 2022	957232	-	<0.2	0	0	-	-	-	<0.2	<0.2
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	-	0	0	-	<0.1	<0.1	<0.2	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-

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					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-

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Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Herbicides	Insecticides	Pesticides						
					Dinoseb	Tokuthion	Scheduled chemicals (total, NSW Waste 2014)	Moderately harmful pesticides (total)	Fenamiphos	Isodrin	Mirex	Parathion	Pirimiphos-methyl
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
NEPM 2013 Sch B1 Table 7 Asbestos HSLs													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil													
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses													
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Herbicides	Insecticides	Pesticides						
					Dinoseb	Tokuthion	Scheduled chemicals (total, NSW Waste 2014)	Moderately harmful pesticides (total)	Fenamiphos	Isodrin	Mirex	Parathion	Pirimiphos-methyl
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					20	0.2			0.05	0.1	0.1	0.1	0.2
NEPM 2013 HIL, Residential A											10		
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand													
NEPM 2013 Sch B1 Table 7 Asbestos HSLs													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil													
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses													
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND													
NEPM 2013 ESL UR/POS, Coarse Soil													
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-

Statistics

Number of Results	24	52	37	37	5	22	24	79	52
Number of Detects	0	0	37	37	0	0	0	1	0
Minimum Concentration	<20	<0.2	0	0	<0.05	<0.1	<0.1	<0.1	<0.2
Minimum Detect	ND	ND	0	0	ND	ND	ND	0.2	ND
Maximum Concentration	<20	<0.5	17.79	0	<0.1	<0.1	<0.1	<0.5	<0.5
Maximum Detect	ND	ND	17.79	0	ND	ND	ND	0.2	ND
Average Concentration *	10	0.15	1.3	0	0.035	0.05	0.05	0.13	0.15
Geometric Average *	10	0.13	0	0	0.033	0.05	0.05	0.12	0.13
Median Concentration *	10	0.1	0	0	0.025	0.05	0.05	0.1	0.1
Standard Deviation *	0	0.071	3.9	0	0.014	0	0	0.064	0.071
Geometric Standard Deviation *	1	1.5			1.5	1	1	1.5	1.5
95% UCL (Student's-t) *	10	0.166	2.325	0	0.0481	0.05	0.05	0.144	0.166
% of Detects	0	0	100	100	0	0	0	1	0
% of Non-Detects	100	100	0	0	100	100	100	99	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

	Polychlorinated Biphenyls										SVOCs	Perfluorocarbons						
	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1268	Aroclor 1262	PCBs (Sum of total)	EPN	8:2 Fluorotelomer sulfonate	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A										1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																		0.01
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																		
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																		
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																		
NEPM 2013 ESL UR/POS, Coarse Soil																		

Location Code	Field ID	Sample Type	Date	Lab Report Number																
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	-
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP8 0.9-1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	-
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	-
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Polychlorinated Biphenyls										SVOCs	Perfluorocarbons							
					Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1268	Aroclor 1262	PCBs (Sum of total)	EPN	8:2 Fluorotelomer sulfonate	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A														1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						0.01
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
TP17																						
	TP17 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<0.5	-	-	-	-	-	-	<0.005
	TP17 0.5-0.6	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP17 1-1.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP18																						
	TP18 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP18 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP19																						
	TP19 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP19 0.3-0.4	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP19 0.8-0.9	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP2	**Field_D**	**24 Apr 2024**	**1091634**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	-
	Trip2	**Interlab_D**	**24 Apr 2024**	**SE264540**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
TP20																						
	TP20 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
	TP20 0.4-0.5	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21																						
	TP21 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	<0.005
TP/HA22																						
	TP/HA22 0-0.1	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	TP/HA22 0.2-0.3	**Normal**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	DUP3	**Field_D**	**24 Apr 2024**	**1091634**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Trip3	**Interlab_D**	**24 Apr 2024**	**SE264540**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Detailed Site Investigation

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					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A														1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						0.01
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
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NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	QC400	Interlab_D	20 Dec 2022	957232	<1	<1	<1	<1	<1	<1	<1	-	-	<1	<0.5	-	-	-	-	-	-	-
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
	BH27_0.5	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	QC200	Interlab_D	19 Dec 2022	957232	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	<0.1	<0.2	-	-	-	-	-	-	-
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	-	-	-	-	-	-	-	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A														1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
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PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Polychlorinated Biphenyls										SVOCs	Perfluorocarbons						
					Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1268	Aroclor 1262	PCBs (Sum of total)	EPN	8:2 Fluorotelomer sulfonate	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A														1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						0.01
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Polychlorinated Biphenyls										SVOCs	Perfluorocarbons						
					Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Arochlor 1268	Aroclor 1262	PCBs (Sum of total)	EPN	8:2 Fluorotelomer sulfonate	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.1	0.2	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016
NEPM 2013 HIL, Residential A														1								
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																						
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																						
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																						0.01
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses																						
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses																						
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT																						
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND																						
NEPM 2013 ESL UR/POS, Coarse Soil																						
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Statistics

Number of Results					76	76	76	76	76	76	76	22	22	79	52	6	6	6	6	6	6	36
Number of Detects					0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Minimum Concentration					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.2	<0.1	<0.2	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<1	<1	<1	<1	<1	<1	<1	<0.2	<0.2	<1	<0.5	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.005
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.1	0.1	0.27	0.15	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0022
Geometric Average *					0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16	0.14	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0021
Median Concentration *					0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0025
Standard Deviation *					0.18	0.18	0.18	0.18	0.18	0.18	0.18	0	0	0.23	0.074	0	0	0	0	0	0	0.00064
Geometric Standard Deviation *					2.5	2.5	2.5	2.5	2.5	2.5	2.5	1	1	3.2	1.6	1	1	1	1	1	1	1.5
95% UCL (Student's-t) *					0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.315	0.17	0.0008	0.0008	0.0008	0.0008	0.0008	0.0008	0.0024
% of Detects					0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	98	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

		Perfluorocarbons					
		Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A							
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							
PFAS NEMP 2.0 Table 2 Health Residential accessible soil		0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses		0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses		1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential							
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged							
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT							
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND							
NEPM 2013 ESL UR/POS, Coarse Soil							
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**			
AHA101	AHA101 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA102	AHA102 0-0.01	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA103	AHA103 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
	AHA103 0.35-0.4	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA104	AHA104 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA105	AHA105 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
	AHA105 0.2-0.25	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA106	AHA106 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA107	AHA107 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
	DUP1	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-
	Trip1	Interlab_D	22 Apr 2024	SE264540	-	-	-	-	-	-
AHA108	AHA108 0.02-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA109	AHA109 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA110	AHA110 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
	Trip4	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-
	DUP4	Field_D	22 Apr 2024	1091634	-	-	-	-	-	-
AHA111	AHA111 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA112	AHA112 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
AHA113	AHA113 0-0.1	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
	AHA113 0.1-0.2	Normal	22 Apr 2024	1091634	-	-	-	-	-	-
TP1	TP1 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
	TP1 0.6-0.7	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP2	TP2 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP2 0.2-0.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP3	TP3 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP4	TP4 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP4 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP5	TP5 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP5 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
	TP5 1.4-1.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
	TP5 2.2-2.3	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP6	TP6 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP6 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP7	TP7 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP8	TP8 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP8 0.9-1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP9	TP9 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP10	TP10 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP10 0.4-0.5	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
	TP10 0.7-0.8	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP11	TP11 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP12	TP12 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP12 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP13	TP13 0-0.1	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
	TP13 0.5-0.6	Normal	23 Apr 2024	1091634	-	-	-	-	-	-
TP14	TP14 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP15	TP15 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP16	TP16 0-0.1	Normal	23 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Perfluorocarbons					
					Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A										
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs										
PFAS NEMP 2.0 Table 2 Health Residential accessible soil					0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses					0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses					1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND										
NEPM 2013 ESL UR/POS, Coarse Soil										
TP17	TP17 0-0.1	Normal	24 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP17 0.5-0.6	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	TP17 1-1.1	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
TP18	TP18 0-0.1	Normal	24 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP18 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
TP19	TP19 0-0.1	Normal	24 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP19 0.3-0.4	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	TP19 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	TP19 0.8-0.9	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	DUP2	Field_D	24 Apr 2024	1091634	-	-	-	-	-	-
	Trip2	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-
TP20	TP20 0-0.1	Normal	24 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
	TP20 0.4-0.5	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
TP21	TP21 0-0.1	Normal	24 Apr 2024	1091634	<0.005	-	-	<0.005	<0.01	<0.005
TP/HA22	TP/HA22 0-0.1	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	TP/HA22 0.2-0.3	Normal	24 Apr 2024	1091634	-	-	-	-	-	-
	DUP3	Field_D	24 Apr 2024	1091634	-	-	-	-	-	-
	Trip3	Interlab_D	24 Apr 2024	SE264540	-	-	-	-	-	-

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					Perfluorocarbons					
					Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A										
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs										
PFAS NEMP 2.0 Table 2 Health Residential accessible soil					0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses					0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses					1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND										
NEPM 2013 ESL UR/POS, Coarse Soil										
BH01	BH01_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	BH01_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH03	BH03_0.3	Normal	19 Dec 2022	SE241126	<0.0016	<0.0016	<0.0016	<0.0016	-	<0.0008
	BH03_0.8-1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH03_1.3-1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH04	BH04_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH05	BH05_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH05_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH06	BH06_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH06_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH07	BH07_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH07_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH08	BH08_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	BH08_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
BH09	BH09_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH11	BH11_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH12	BH12_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH14	BH14_0.2	Normal	20 Dec 2022	SE241126	<0.0016	<0.0016	<0.0016	<0.0016	-	<0.0008
	BH14_1.3	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	BH14_1.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
BH15	BH15_0.2	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	BH15_0.5	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	BH15_1.4	Normal	20 Dec 2022	SE241126	-	-	-	-	-	-
	QA400	Field_D	20 Dec 2022	SE241126	-	-	-	-	-	-
	QC400	Interlab_D	20 Dec 2022	957232	-	-	-	-	-	-
BH16	BH16_0.2	Normal	21 Dec 2022	SE241126	<0.0016	<0.0016	<0.0016	<0.0016	-	<0.0008
BH17	BH17_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
	BH17_0.9	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH18	BH18_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH19	BH19_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
	BH19_0.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH20	BH20_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
	BH20_1.5	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH21	BH21_0.8	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH22	BH22_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH23	BH23_0.1	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH24	BH24_0.2	Normal	21 Dec 2022	SE241126	-	-	-	-	-	-
BH25	BH25_0.2	Normal	20 Dec 2022	SE241126	<0.0016	<0.0016	<0.0016	<0.0016	-	<0.0008
BH26	BH26_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
BH27	BH27_0.1-0.2	Normal	19 Dec 2022	SE241126	<0.0016	<0.0016	<0.0016	<0.0016	-	<0.0008
	BH27_0.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH27_1.5	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	QA200	Field_D	19 Dec 2022	SE241126	-	-	-	-	-	-
	QC200	Interlab_D	19 Dec 2022	957232	-	-	-	-	-	-
BH28	BH28_0.2	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
	BH28_1.0	Normal	19 Dec 2022	SE241126	-	-	-	-	-	-
HA101	HA101-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA102	HA102-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA102_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA103	HA103-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
				SE242288A	-	-	-	-	-	-
	HA103_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA104	HA104-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA104_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA105	HA105-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA106	HA106-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	QA100	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-
	QC100	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-
HA107	HA107-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA108	HA108-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA108_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA109	HA109-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA109_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA110	HA110-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA111	HA111-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA111_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA112	HA112-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-

					Perfluorocarbons					
					Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A										
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs										
PFAS NEMP 2.0 Table 2 Health Residential accessible soil					0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses					0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses					1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND										
NEPM 2013 ESL UR/POS, Coarse Soil										
	HA112_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
	QA200	Field_D	25 Jan 2023	SE242288	-	-	-	-	-	-
	QC200	Interlab_D	25 Jan 2023	960232	-	-	-	-	-	-
HA113	HA113-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA114	HA114-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA115	HA115-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
HA116	HA116-0.1	Normal	25 Jan 2023	SE242288	-	-	-	-	-	-
	HA116_0.3	Normal	25 Jan 2023	SE242288B	-	-	-	-	-	-
HA201	HA201 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-
HA202	DUP1	Field_D	03 Feb 2023	SE242738	-	-	-	-	-	-
	HA202 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-
HA203	HA203 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-
HA204	HA204 0.1	Normal	03 Feb 2023	SE242738	-	-	-	-	-	-
HA301	HA301_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA302	HA302_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA303	HA303_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA304	HA304_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA305	HA305_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA306	HA306_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA307	HA307_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA308	HA308_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA309	HA309_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA310	HA310_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA311	HA311_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
	QA111	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-
HA312	HA312_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA313	HA313_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA314	HA314_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA315	HA315_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA316	HA316_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA317	HA317_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA318	HA318_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA319	HA319_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA320	HA320_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
	QA112	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-
HA321	HA321_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA322	HA322_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA323	HA323_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA324	HA324_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA325	HA325_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
	QA113	Field_D	10 Feb 2023	SE243062	-	-	-	-	-	-
HA326	HA326_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA327	HA327_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA328	HA328_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA329	HA329_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA330	HA330_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
HA331	HA331_0.1	Normal	10 Feb 2023	SE243062	-	-	-	-	-	-
QC111	QC111	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-
QC112	QC112	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-
QC113	QC113	Interlab_D	10 Feb 2023	964020	-	-	-	-	-	-
VAL_B01	VAL_B01	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_B02	VAL_B02	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_B03	VAL_B03	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_B04	VAL_B04	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_B05	VAL_B05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_B06	VAL_B06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_B07	VAL_B07	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W01	VAL_W01_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_W02	VAL_W02_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_W03	VAL_W03_0.3	Normal	17 Apr 2023	ES2312555-AA	-	-	-	-	-	-
VAL_W04	VAL_W04	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W05	VAL_W05	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W06	VAL_W06	Normal	18 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W07	VAL_W07	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W08	VAL_W08	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W09	VAL_W09	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-
VAL_W10	VAL_W10	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Perfluorocarbons					
					Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A										
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs										
PFAS NEMP 2.0 Table 2 Health Residential accessible soil					0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses					0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses					1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND										
NEPM 2013 ESL UR/POS, Coarse Soil										
VAL_W11	VAL_W11	Normal	17 Apr 2023	ES2312724	-	-	-	-	-	-
VAL-B08	VAL-B08	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-B09	VAL-B09	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-B10	VAL-B10	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALC-B01	QA100	Field_D	19 Apr 2023	982613	-	-	-	-	-	-
	QA200	Interlab_D	19 Apr 2023	321513	-	-	-	-	-	-
	VALC-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B02	VALC-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B03	VALC-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B04	VALC-B04	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B05	QA300	Field_D	19 Apr 2023	982613	-	-	-	-	-	-
	QA400	Normal	19 Apr 2023	321513	-	-	-	-	-	-
	VALC-B05	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B06	VALC-B06	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B07	VALC-B07	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B08	VALC-B08	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B09	VALC-B09	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-B10	VALC-B10	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W01	VALC-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W02	VALC-W02-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W04	VALC-W04-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W05	VALC-W05-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W06	VALC-W06-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W07	VALC-W07-0.4	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W08	VALC-W08-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W09	VALC-W09-0.45	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W10	VALC-W10-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W11	VALC-W11-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W12	VALC-W12-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W13	VALC-W13-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W14	VALC-W14-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W15	VALC-W15-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALC-W16	VALC-W16-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALE-B01	VALE-B01	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-B02	VALE-B02	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-B03	VALE-B03	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-B04	VALE-B04	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W01	VALE-W01-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W02	VALE-W02-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W03	VALE-W03-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W04	VALE-W04-0.4	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W05	VALE-W05-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W06	VALE-W06-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W07	VALE-W07-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W08	VALE-W08-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W09	VALE-W09-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-

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Table 1: Soil Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Perfluorocarbons					
					Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.0016	0.0016	0.0016	0.0016	0.01	0.0008
NEPM 2013 HIL, Residential A										
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs										
PFAS NEMP 2.0 Table 2 Health Residential accessible soil					0.01			0.01		0.1
PFAS NEMP 2020 Ecological indirect exposure - All Land Uses					0.01					
PFAS NEMP 2020 Ecological Direct exposure - All Land Uses					1			20		50
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Sandy to gravelly SILT										
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged - Clayey to gravelly SAND										
NEPM 2013 ESL UR/POS, Coarse Soil										
VALE-W10	VALE-W10-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W11	VALE-W11-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALE-W12	VALE-W12-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VALN-B01	VALN-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-B02	QA500	Field_D	19 Apr 2023	982613	-	-	-	-	-	-
	QA600	Normal	19 Apr 2023	321513	-	-	-	-	-	-
	VALN-B02	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-B03	VALN-B03	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W01	VALN-W01-0.3	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W02	VALN-W02-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W03	VALN-W03-0.1	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W04	VALN-W04-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W05	VALN-W05-0.35	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W06	VALN-W06-0.15	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALN-W07	VALN-W07-0.25	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALS-B01	QA700	Field_D	19 Apr 2023	982613	-	-	-	-	-	-
	QA800	Normal	19 Apr 2023	321513	-	-	-	-	-	-
	VALS-B01	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VALS-W01	VALS-W01-0.2	Normal	19 Apr 2023	982613	-	-	-	-	-	-
VAL-W12	VAL-W12-0.3	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W13	VAL-W13-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W14	VAL-W14-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W15	VAL-W15-0.35	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W16	VAL-W16-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W17	VAL-W17-0.1	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W18	VAL-W18-0.2	Normal	19 Apr 2023	982292	-	-	-	-	-	-
VAL-W19	VAL-W19-0.25	Normal	19 Apr 2023	982292	-	-	-	-	-	-

Statistics

Number of Results	36	6	6	36	30	36
Number of Detects	0	0	0	0	0	0
Minimum Concentration	<0.0016	<0.0016	<0.0016	<0.0016	<0.01	<0.0008
Minimum Detect	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.005	<0.0016	<0.0016	<0.005	<0.01	<0.005
Maximum Detect	ND	ND	ND	ND	ND	ND
Average Concentration *	0.0022	0.0008	0.0008	0.0022	0.005	0.0022
Geometric Average *	0.0021	0.0008	0.0008	0.0021	0.005	0.0018
Median Concentration *	0.0025	0.0008	0.0008	0.0025	0.005	0.0025
Standard Deviation *	0.00064	0	0	0.00064	0	0.00079
Geometric Standard Deviation *	1.5	1	1	1.5	1	2
95% UCL (Student's-t) *	0.0024	0.0008	0.0008	0.0024	0.005	0.00237
% of Detects	0	0	0	0	0	0
% of Non-Detects	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

					TPH					CRC Care TPH Fractions						
					C6 - C9	C10 - C14	C15 - C28	C29-C36	>C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					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					20	20	50	50	50	20	50	100	100	100	20	50
ANZG (2018) Sediment Quality Guidelines (DGV)																
ANZG (2018) Sediment Quality Guidelines (GV-high)																
NEPM 2013 HIL, Residential A																
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand															45 | 70 | 110 | 200	110 | 240 | 440
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential										4,400	3,300	4,500	6,300			
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																
NEPM 2013 ESL UR/POS, Coarse Soil						120					120	300	2,800		180	
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**												
SED1	SED1	Normal	29 Apr 2024	1092003	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	SED DUP1	Field_D	29 Apr 2024	1092003	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A												
Statistics																
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					10	10	25	25	25	10	25	50	50	50	10	25
Geometric Average *					10	10	25	25	25	10	25	50	50	50	10	25
Median Concentration *					10	10	25	25	25	10	25	50	50	50	10	25
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					10	10	25	25	25	10	25	50	50	50	10	25
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 2: Sediment Analytical Results

Project: 304100928
Site: Gillieston Public School
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					BTEX							Metals							
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
					mg/kg	mg/kg	mg/kg	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					0.5	0.1	0.1	0.1	0.2	0.1	0.3	2	0.4	5	5	5	0.1	5	5
ANZG (2018) Sediment Quality Guidelines (DGV)												20	1.5	80	65	50	0.15	21	200
ANZG (2018) Sediment Quality Guidelines (GV-high)												70	10	370	270	220	1	52	410
NEPM 2013 HIL, Residential A												100	20		6,000	300	40	400	7,400
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand						0.5 | 0.5 | 0.5 | 0.5	160 | 220 | 310 | 540	55			40 | 60 | 95 | 170							
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																			
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																			
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential						100	14,000	4,500			12,000								
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged												100		190	60	1,100		30	70
NEPM 2013 ESL UR/POS, Coarse Soil						50	85	70			105								
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**															
SED1	SED1	Normal	29 Apr 2024	1092003	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.2	<0.4	6.7	<5	6.3	<0.1	<5	<5
	SED DUP1	Field_D	29 Apr 2024	1092003	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.1	<0.4	5.5	<5	6.0	<0.1	<5	<5
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A															

Statistics

Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects	0	0	0	0	0	0	0	2	0	2	0	2	0	0	0	0
Minimum Concentration	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.1	<0.4	5.5	<5	6	<0.1	<5	<5	<5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	2.1	ND	5.5	ND	6	ND	ND	ND	ND
Maximum Concentration	<0.5	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.2	<0.4	6.7	<5	6.3	<0.1	<5	<5	<5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	2.2	ND	6.7	ND	6.3	ND	ND	ND	ND
Average Concentration *	0.25	0.05	0.05	0.05	0.1	0.05	0.15	2.2	0.2	6.1	2.5	6.2	0.05	2.5	2.5	2.5
Geometric Average *	0.25	0.05	0.05	0.05	0.1	0.05	0.15	2.1	0.2	6.1	2.5	6.1	0.05	2.5	2.5	2.5
Median Concentration *	0.25	0.05	0.05	0.05	0.1	0.05	0.15	2.15	0.2	6.1	2.5	6.15	0.05	2.5	2.5	2.5
Standard Deviation *	0	0	0	0	0	0	0	0.071	0	0.85	0	0.21	0	0	0	0
Geometric Standard Deviation *	1	1	1	1	1	1	1	1	1	1.1	1	1	1	1	1	1
95% UCL (Student's-t) *	0.25	0.05	0.05	0.05	0.1	0.05	0.15	2.466	0.2	9.888	2.5	7.097	0.05	2.5	2.5	2.5
% of Detects	0	0	0	0	0	0	0	100	0	100	0	100	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	0	100	0	100	0	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 2: Sediment Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

	Organic		PAH																				
	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz[a]anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(b+j)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)
	UG/KG	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	5	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	0.5	0.5	0.5	0.5	0.5	0.5
ANZG (2018) Sediment Quality Guidelines (DGV)																							10
ANZG (2018) Sediment Quality Guidelines (GV-high)																							50
NEPM 2013 HIL, Residential A																				3	3	3	300
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand			3																				
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																							
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																							
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																							
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential			1,400																				
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged			170																				
NEPM 2013 ESL UR/POS, Coarse Soil																0.7							

Location Code	Field ID	Sample Type	Date	Lab Report Number																					
SED1	SED1	Normal	29 Apr 2024	1092003	<5	<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	<0.5	<0.5	0.6	1.2	<0.5
	SED DUP1	Field_D	29 Apr 2024	1092003	<5	<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	<0.5	<0.5	0.6	1.2	<0.5
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A																					

Statistics																									
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	2	0
Minimum Concentration	<5	<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	<0.5	<0.5	<0.5	0.6	1.2	<0.5	0.6	1.2
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	0.6	1.2
Maximum Concentration	<5	<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	<0.5	<0.5	<0.5	0.6	1.2	<0.5	0.6	1.2
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	1.2	ND	0.6	1.2
Average Concentration *	2.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.6	1.2
Geometric Average *	2.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.6	1.2
Median Concentration *	2.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.6	1.2
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *	2.5	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.6	1.2
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	100	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	0	0	100	0	100

* A Non Detect Multiplier of 0.5 has been applied.

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Table 2: Sediment Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

					Phenols										Halogenated Phenols							NA						
					2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexylphenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Total Halogenated Phenols*	Total Non-Halogenated Phenols*	Total Other OC VIC EPA	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2)F	Perfluorobutane sulfonate (PFBS)	Perfluorononane sulfonate (PFNS)	3/4-Methylphenol (m/p-cresol)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/L	µg/L	µg/L	µg/L	µg/L	mg/kg
EQL					0.5	5	0.2	1	5	20	1	5	0.5	0.5	1	1	0.5	0.5	0.5	1	10	1	20	100	0.0005	0.001	0.0005	0.4
ANZG (2018) Sediment Quality Guidelines (DGV)																													
ANZG (2018) Sediment Quality Guidelines (GV-high)																													
NEPM 2013 HIL, Residential A													400	3,000						100									
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																													
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																													
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																													
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																													
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																													
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																													
NEPM 2013 ESL UR/POS, Coarse Soil																													
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																									
SED1	SED1	Normal	29 Apr 2024	1092003	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10	<1	<20	<100				<0.4
	SED DUP1	Field_D	29 Apr 2024	1092003	<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10	<1	<20	<100				<0.4
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A																					<1.6	<1.6	<1.6	
Statistics																													
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10	<1	<20	<100	<1.6	<1.6	<1.6	<0.4
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.5	<5	<0.2	<1	<5	<20	<1	<5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10	<1	<20	<100	<1.6	<1.6	<1.6	<0.4
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.25	2.5	0.1	0.5	2.5	10	0.5	2.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	5	0.5	10	50	0.8	0.8	0.8	0.2
Geometric Average *					0.25	2.5	0.1	0.5	2.5	10	0.5	2.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	5	0.5	10	50	0.8	0.8	0.8	0.2
Median Concentration *					0.25	2.5	0.1	0.5	2.5	10	0.5	2.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	5	0.5	10	50	0.8	0.8	0.8	0.2
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.25	2.5	0.1	0.5	2.5	10	0.5	2.5	0.25	0.25	0.5	0.5	0.25	0.25	0.25	0.5	5	0.5	10	50	0.8	0.8	0.8	0.2
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

					Organochlorine Pesticides																					
					Organochlorine pesticides (WKG#21	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	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	0.05	0.05	0.05	0.05	0.5
ANZG (2018) Sediment Quality Guidelines (DGV)											0.0045		0.0014			0.0028				0.0027								
ANZG (2018) Sediment Quality Guidelines (GV-high)											0.009		0.007			0.007				0.06								
NEPM 2013 HIL, Residential A									6		50				240					10				6		10	300	20
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																												
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																												
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																												
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																												
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																												
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged														180														
NEPM 2013 ESL UR/POS, Coarse Soil																												
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																								
SED1	SED1	Normal	29 Apr 2024	1092003	<0.1	<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	<0.05	<0.05	<0.05	<0.05	<0.5
	SED DUP1	Field_D	29 Apr 2024	1092003	<0.1	<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	<0.05	<0.05	<0.05	<0.05	<0.5
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A																								
Statistics																												
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.1	<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	<0.05	<0.05	<0.05	<0.05	<0.5
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.1	<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	<0.05	<0.05	<0.05	<0.05	<0.5
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.05	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25
Geometric Average *					0.05	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25
Median Concentration *					0.05	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.05	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Stantec

Table 2: Sediment Analytical Results

Project: 304100928
Site: Gillieston Public School
Detailed Site investigation

					Organophosphorous Pesticides																											
					Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.2	0.2	0.2	0.2	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	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2
ANZG (2018) Sediment Quality Guidelines (DGV)																																	
ANZG (2018) Sediment Quality Guidelines (GV-high)																																	
NEPM 2013 HIL, Residential A								160																									
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																																	
PFAS NEMP 2.0 Table 2 Health Residential accessible soil																																	
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses																																	
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																																	
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																																	
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																																	
NEPM 2013 ESL UR/POS, Coarse Soil																																	
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																													
SED1	SED1	Normal	29 Apr 2024	1092003	<0.2	<0.2	<0.2	<0.2	<0.2	<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	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
	SED DUP1	Field_D	29 Apr 2024	1092003	<0.2	<0.2	<0.2	<0.2	<0.2	<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	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A																													
Statistics																																	
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.2	<0.2	<0.2	<0.2	<0.2	<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	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.2	<0.2	<0.2	<0.2	<0.2	<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	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1
Geometric Average *					0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1
Median Concentration *					0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

	Herbicides	Insecticides	Pesticides		Polychlorinated Biphenyls								SVOCs	Perfluorocarbons				
	Dinoseb	Toluthion	Parathion	Pirimiphos-methyl	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	EPN	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (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	mg/kg
EQL	20	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.005	0.005	0.005	0.01	0.005
ANZG (2018) Sediment Quality Guidelines (DGV)												0.034						
ANZG (2018) Sediment Quality Guidelines (GV-high)												0.28						
NEPM 2013 HIL, Residential A												1						
NEPM 2013 Soil HSL Residential A&B, for Vapour Intrusion, Sand																		
PFAS NEMP 2.0 Table 2 Health Residential accessible soil														0.01	0.01	0.01		0.1
PFAS NEMP 2.0 Table 3 Ecological Direct Exposure - All Land Uses															1			10
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses															0.01			
CRCCARE 2011 Soil HSL for Direct Contact, HSL-A Residential																		
NEPM 2013 EIL UR/POS, low pH, CEC, clay content - aged																		
NEPM 2013 ESL UR/POS, Coarse Soil																		

Location Code	Field ID	Sample Type	Date	Lab Report Number														
SED1	SED1	Normal	29 Apr 2024	1092003	<20	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.005	<0.005	<0.005	<0.01	<0.005
	SED DUP1	Field_D	29 Apr 2024	1092003	<20	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.005	<0.005	<0.005	<0.01	<0.005
	SED TRIP1	Interlab_D	29 Apr 2024	SE266735A														<0.0016	<0.0016	<0.0016	<0.0016	<0.0016

Statistics																		
Number of Results	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<20	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<20	<0.2	<0.2	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *	10	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.0025	0.0025	0.0025	0.005	0.0025
Geometric Average *	10	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.0025	0.0025	0.0025	0.005	0.0025
Median Concentration *	10	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.0025	0.0025	0.0025	0.005	0.0025
Standard Deviation *	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *	10	0.1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.0025	0.0025	0.0025	0.005	0.0025
% of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

					NA				TPH					CRC Care TPH Fractions							
					Arsenic (low-level)	Sum of WA DWER PFAS (n=10)*	Total Other OC VIC EPA	Perfluorononane sulfonate (PFNS)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
					MG/L	UG/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.0005	0.005	0.01	0.001	20	50	100	100	100	20	50	100	100	100	20	50
ADWG 2022 Aesthetic																				
ANZG (2018) Freshwater 95% toxicant DGVs																				
ANZG (2018) Freshwater 99% toxicant DGVs																				
PFAS NEMP 2.0 Table 5 Freshwater 95%																				
PFAS NEMP 2.0 Table 5 Freshwater 99%																				
ANZECC 2000 Irrigation - Short-term trigger value																				
ANZECC 2000 Irrigation - Long-term trigger value																				
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																			1,000 | 1,000 | 1,000	1,000 | 1,000 | 1,000
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																
SW1	SW1	Normal	29 Apr 2024	1092003	0.015	0.017	<0.01	<0.001	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50
	DUP1-W	Field_D	29 Apr 2024	1092003	0.016	0.016	<0.01	<0.001	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistics																				
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0.015	0.016	<0.01	<0.001	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50
Minimum Detect					0.015	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					0.016	0.017	<0.01	<0.001	<20	<50	<100	<100	<100	<20	<50	<100	<100	<100	<20	<50
Maximum Detect					0.016	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.016	0.016	0.005	0.0005	10	25	50	50	50	10	25	50	50	50	10	25
Geometric Average *					0.015	0.016	0.005	0.0005	10	25	50	50	50	10	25	50	50	50	10	25
Median Concentration *					0.0155	0.0165	0.005	0.0005	10	25	50	50	50	10	25	50	50	50	10	25
Standard Deviation *					0.00071	0.00071	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1.1	1.1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.0187	0.0197	0.005	0.0005	10	25	50	50	50	10	25	50	50	50	10	25
% of Detects					100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					0	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					BTEX							Metals																	
					Naphthalene (VOC)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Arsenic	Arsenic (filtered)	Cadmium	Cadmium (filtered)	Chromium (III+VI)	Chromium (III+VI) (filtered)	Copper	Copper (filtered)	Lead	Lead (filtered)	Mercury	Mercury (filtered)	Nickel	Nickel (filtered)	Zinc	Zinc (filtered)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		µg/L			
EQL					10	1	1	1	2	1	3	1	0.5	0.2	0.05	1	0.5	1	1	1	0.2	0.01	0.1	1	0.5	1	5
ADWG 2022 Aesthetic							25	3			20							1,000	1,000							3,000	3,000
ANZG (2018) Freshwater 95% toxicant DGVs						950				350				0.2	0.2			1.4	1.4	3.4	3.4	0.6	0.6	11	11	8	8
ANZG (2018) Freshwater 99% toxicant DGVs						600				200				0.06	0.06			1	1	1	1	0.06	0.06	8	8	2.4	2.4
PFAS NEMP 2.0 Table 5 Freshwater 95%																											
PFAS NEMP 2.0 Table 5 Freshwater 99%																											
ANZECC 2000 Irrigation - Short-term trigger value												2,000	2,000	50	50	1,000	1,000	5,000	5,000	5,000	5,000	2	2	2,000	2,000	5,000	5,000
ANZECC 2000 Irrigation - Long-term trigger value												100	100	10	10	100	100	200	200	2,000	2,000	2	2	200	200	2,000	2,000
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand						800 | 800 | 900																				
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																							
SW1	SW1	Normal	29 Apr 2024	1092003	<10	<1	<1	<1	<2	<1	<3	15	1	<0.2	<0.1	14	<1	19	2	13	2	<0.01	<0.1	9	1	140	18
	DUP1-W	Field_D	29 Apr 2024	1092003	<10	<1	<1	<1	<2	<1	<3	16	-	<0.2	-	8	-	11	-	9	-	<0.01	-	6	-	80	-
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	1.3	-	<0.05	-	0.6	-	2	-	0.3	-	<0.1	-	1.5	-	13
Statistics																											
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	2	2	0	0	2	1	2	2	2	2	0	0	2	2	2	2
Minimum Concentration					<10	<1	<1	<1	<2	<1	<3	15	1	<0.2	<0.05	8	0.6	11	2	9	0.3	<0.01	<0.1	6	1	80	13
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	15	1	ND	ND	8	0.6	11	2	9	0.3	ND	ND	6	1	80	13
Maximum Concentration					<10	<1	<1	<1	<2	<1	<3	16	1.3	<0.2	<0.1	14	<1	19	2	13	2	<0.01	<0.1	9	1.5	140	18
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	16	1.3	ND	ND	14	0.6	19	2	13	2	ND	ND	9	1.5	140	18
Average Concentration *					5	0.5	0.5	0.5	1	0.5	1.5	16	1.2	0.1	0.038	11	0.55	15	2	11	1.2	0.005	0.05	7.5	1.2	110	16
Geometric Average *					5	0.5	0.5	0.5	1	0.5	1.5	15	1.1	0.1	0.035	11	0.55	14	2	11	0.77	0.005	0.05	7.3	1.2	106	15
Median Concentration *					5	0.5	0.5	0.5	1	0.5	1.5	15.5	1.15	0.1	0.0375	11	0.55	15	2	11	1.15	0.005	0.05	7.5	1.25	110	15.5
Standard Deviation *					0	0	0	0	0	0	0	0.71	0.21	0	0.018	4.2	0.071	5.7	0	2.8	1.2	0	0	2.1	0.35	42	3.5
Geometric Standard Deviation *					1	1	1	1	1	1	1	1.1	1.2	1	1.6	1.5	1.1	1.5	1	1.3	3.8	1	1	1.3	1.3	1.5	1.3
95% UCL (Student's-t) *					5	0.5	0.5	0.5	1	0.5	1.5	18.66	1.925	0.1	0.115	29.94	0.866	40.26	2	23.63	6.517	0.005	0.05	16.97	2.828	299.4	31.28
% of Detects					0	0	0	0	0	0	0	100	100	0	0	100	50	100	100	100	100	0	0	100	100	100	100
% of Non-Detects					100	100	100	100	100	100	100	0	0	100	100	0	50	0	0	0	0	100	100	0	0	0	0

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					Organic			PAH															
					Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	PAHs (Sum of total)
					UG/KG	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L
EQL					0.001	0.001	0.001	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00001	0.01	0.01	0.01	0.01
ADWG 2022 Aesthetic																							
ANZG (2018) Freshwater 95% toxicant DGVs								16															
ANZG (2018) Freshwater 99% toxicant DGVs								2.5															
PFAS NEMP 2.0 Table 5 Freshwater 95%																							
PFAS NEMP 2.0 Table 5 Freshwater 99%																							
ANZECC 2000 Irrigation - Short-term trigger value																							
ANZECC 2000 Irrigation - Long-term trigger value																							
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																							
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																			
SW1	SW1	Normal	29 Apr 2024	1092003	<0.001	0.004	0.004	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	<0.02
	DUP1-W	Field_D	29 Apr 2024	1092003	0.001	0.004	0.005	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	<0.02
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistics																							
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					0.001	0.004	0.004	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	<0.02
Minimum Detect					0.001	0.004	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					0.001	0.004	0.005	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	<0.02
Maximum Detect					0.001	0.004	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.00075	0.004	0.0045	0.01	0.0075	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.005	0.005	0.005	0.000005	0.005	0.005	0.005	0.01
Geometric Average *					0.00071	0.004	0.0045	0.01	0.0071	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.005	0.005	0.005	0.000005	0.005	0.005	0.005	0.01
Median Concentration *					0.00075	0.004	0.0045	0.01	0.0075	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.005	0.005	0.005	0.000005	0.005	0.005	0.005	0.01
Standard Deviation *					0.00035	0	0.00071	0	0.0035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1.6	1	1.2	1	1.6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.00233	0.004	0.00766	0.01	0.0233	0.005	0.005	0.005	0.005	0.01	0.01	0.005	0.005	0.005	0.005	0.000005	0.005	0.005	0.005	0.01
% of Detects					50	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					50	0	0	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					Organochlorine Pesticides																					
					Organochlorine pesticides (WRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
					ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL					0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002
ADWG 2022 Aesthetic																												
ANZG (2018) Freshwater 95% toxicant DGVs											0.08			0.01						0.02			0.2	0.09				0.0002
ANZG (2018) Freshwater 99% toxicant DGVs											0.03			0.006						0.01			0.07	0.01				0.0001
PFAS NEMP 2.0 Table 5 Freshwater 95%																												
PFAS NEMP 2.0 Table 5 Freshwater 99%																												
ANZECC 2000 Irrigation - Short-term trigger value																												
ANZECC 2000 Irrigation - Long-term trigger value																												
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																												
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																								
SW1	SW1	Normal	29 Apr 2024	1092003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002
	DUP1-W	Field_D	29 Apr 2024	1092003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistics																												
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.001
Geometric Average *					0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.001
Median Concentration *					0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.001
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.001
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					Organophosphorous Pesticides																												
					Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL					1	1	1	10	1	10	1	10	1	1	1	1	1	1	1	1	1	1	0.001	1	1	1	1	1	1	1	1	1	1	0.001
ADWG 2022 Aesthetic																																	
ANZG (2018) Freshwater 95% toxicant DGVs					0.02			0.01					0.01		0.15				0.2			0.05											
ANZG (2018) Freshwater 99% toxicant DGVs					0.01			0.00004					0.00003		0.1				0.1			0.002											
PFAS NEMP 2.0 Table 5 Freshwater 95%																																	
PFAS NEMP 2.0 Table 5 Freshwater 99%																																	
ANZECC 2000 Irrigation - Short-term trigger value																																	
ANZECC 2000 Irrigation - Long-term trigger value																																	
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																																	
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																													
SW1	SW1	Normal	29 Apr 2024	1092003	<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001
	DUP1-W	Field_D	29 Apr 2024	1092003	<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistics																																	
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.5	0.5	0.5	5	0.5	5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005
Geometric Average *					0.5	0.5	0.5	5	0.5	5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005
Median Concentration *					0.5	0.5	0.5	5	0.5	5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.5	0.5	0.5	5	0.5	5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0005
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					Insecticides	Pesticides		Polychlorinated Biphenyls									SVOCs
					Toluthion	Parathion	Pirimiphos-methyl	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (sum of total)	EPN
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL					1	1	10	1	1	1	1	1	1	1	1	1
ADWG 2022 Aesthetic																
ANZG (2018) Freshwater 95% toxicant DGVs						0.004					0.6		0.03			
ANZG (2018) Freshwater 99% toxicant DGVs						0.0007					0.3		0.01			
PFAS NEMP 2.0 Table 5 Freshwater 95%																
PFAS NEMP 2.0 Table 5 Freshwater 99%																
ANZECC 2000 Irrigation - Short-term trigger value																
ANZECC 2000 Irrigation - Long-term trigger value																
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**												
SW1	SW1	Normal	29 Apr 2024	1092003	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1
	DUP1-W	Field_D	29 Apr 2024	1092003	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	-	-	-	-	-	-	-	-	-	-	-	-
Statistics																
Number of Results					2	2	2	2	2	2	2	2	2	2	2	2
Number of Detects					0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration *					0.5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Geometric Average *					0.5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Median Concentration *					0.5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1
95% UCL (Student's-t) *					0.5	0.5	5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
% of Detects					0	0	0	0	0	0	0	0	0	0	0	0
% of Non-Detects					100	100	100	100	100	100	100	100	100	100	100	100

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

					Perfluorocarbons																										
					2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (FOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	8:2 Fluorotelomer sulfonate	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFAS	Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L
EQL					0.005	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.005	0.001
ADWG 2022 Aesthetic																																			
ANZG (2018) Freshwater 95% toxicant DGVs																																			
ANZG (2018) Freshwater 99% toxicant DGVs																																			
PFAS NEMP 2.0 Table 5 Freshwater 95%																										0.13									220
PFAS NEMP 2.0 Table 5 Freshwater 99%																										0.00023									19
ANZECC 2000 Irrigation - Short-term trigger value																																			
ANZECC 2000 Irrigation - Long-term trigger value																																			
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand																																			
Location Code	**Field ID**	**Sample Type**	**Date**	**Lab Report Number**																															
SW1	SW1	Normal	29 Apr 2024	1092003	<0.005	<0.005	<0.005	<0.005	0.002	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.002	0.009	<0.001	<0.001	<0.005	<0.005	<0.01	<0.001	<0.001	0.002	<0.001	<0.01	0.017	<0.001	0.002	<0.005	0.002
	DUP1-W	Field_D	29 Apr 2024	1092003	<0.005	<0.005	<0.005	<0.005	0.002	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.002	0.007	<0.001	<0.001	<0.005	<0.005	<0.01	<0.001	0.001	0.002	<0.001	<0.01	0.017	<0.001	0.003	<0.005	0.002
	TRIP1-W	Interlab_D	29 Apr 2024	SE266735C	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.0038	-	<0.0005	<0.0025	<0.0025	0.0031	<0.0002	0.0003	0.0011	<0.0001	0.0029	0.012	-	0.0014	<0.0005	0.0010
Statistics																																			
Number of Results					3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3
Number of Detects					0	0	0	0	2	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	2	0	0	2	0	2	0	2
Minimum Concentration					<0.005	<0.005	<0.005	<0.005	0.002	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.002	0.007	<0.001	<0.001	<0.005	<0.005	<0.01	<0.001	0.001	0.002	<0.001	<0.01	0.017	<0.001	0.002	<0.005	0.002
Minimum Detect					ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.007	ND	ND	ND	ND	ND	ND	0.001	0.002	ND	ND	0.017	ND	0.002	ND	0.002
Maximum Concentration					<0.005	<0.005	<0.005	<0.005	0.002	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	0.002	0.009	<0.001	<0.001	<0.005	<0.005	<0.01	<0.001	0.001	0.002	<0.001	<0.01	0.017	<0.001	0.003	<0.005	0.002
Maximum Detect					ND	ND	ND	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	0.002	0.009	ND	ND	ND	ND	ND	ND	0.001	0.002	ND	ND	0.017	ND	0.003	ND	0.002
Average Concentration *					0.0025	0.0025	0.0025	0.0025	0.002	0.0005	0.0005	0.0005	0.0025	0.0005	0.0005	0.0005	0.0005	0.002	0.008	0.0005	0.0005	0.0025	0.0025	0.005	0.0005	0.00075	0.002	0.0005	0.005	0.017	0.0005	0.0025	0.0025	0.002
Geometric Average *					0.0025	0.0025	0.0025	0.0025	0.002	0.0005	0.0005	0.0005	0.0025	0.0005	0.0005	0.0005	0.0005	0.002	0.0079	0.0005	0.0005	0.0025	0.0025	0.005	0.0005	0.00071	0.002	0.0005	0.005	0.017	0.0005	0.0024	0.0025	0.002
Median Concentration *					0.0025	0.0025	0.0025	0.0025	0.002	0.0005	0.0005	0.0005	0.0025	0.0005	0.0005	0.0005	0.0005	0.002	0.008	0.0005	0.0005	0.0025	0.0025	0.005	0.0005	0.00075	0.002	0.0005	0.005	0.017	0.0005	0.0025	0.0025	0.002
Standard Deviation *					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0014	0	0	0	0	0	0	0.00035	0	0	0	0	0	0.00071	0	0
Geometric Standard Deviation *					1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.2	1	1	1	1	1	1	1.6	1	1	1	1	1	1.3	1	1
95% UCL (Student's-t) *					0.0025	0.0025	0.0025	0.0025	0.002	0.0005	0.0005	0.0005	0.0025	0.0005	0.0005	0.0005	0.0005	0.002	0.0143	0.0005	0.0005	0.0025	0.0025	0.005	0.0005	0.00233	0.002	0.0005	0.005	0.017	0.0005	0.00566	0.0025	0.002
% of Detects					0	0	0	0	100	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0	0	50	100	0	0	100	0	100	0	100
% of Non-Detects					100	100	100	100	0	100	100	100	100	100	100	100	100	0	0	100	100	100	100	100	100	50	0	100	100	0	100	0	100	0

* A Non Detect Multiplier of 0.5 has been applied.

Environmental Standards

NHMRC, September 2022, ADWG 2022 Aesthetic

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Table 4: RPD Summary Table (Soil Sediment)

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

		Field ID	AHA107 0-0.1	DUP1		AHA107 0-0.1	Trip1		AHA110 0-0.1	DUP4		AHA111 0-0.1	Trip4	
		Matrix Type	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Sample Type	Normal	Field_D		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
		Date	22 Apr 2024	22 Apr 2024		22 Apr 2024	22 Apr 2024		22 Apr 2024	22 Apr 2024		22 Apr 2024	24 Apr 2024	
		Lab Report Number	1091634	1091634	RPD	1091634	SE264540	RPD	1091634	1091634	RPD	1091634	SE264540	RPD
	Unit	EQL												
ES_EPA8100														
Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-	-	-	-	-	-	-	-	-	-
EW_EPA418														
TRH C37-C40	mg/kg	100	-	-	-	-	-	-	-	-	-	-	-	-
Halogenated Phenols														
2,4,5-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
2,6-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
2-chlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
tetrachlorophenols	mg/kg	10	-	-	-	-	-	-	-	-	-	-	-	-
NA														
2346&2356-Tetrachlorophenol	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-
Total Halogenated Phenol*	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-
Total Non-Halogenated Phenol*	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
Total Other OC VIC EPA	µg/L	100	-	-	-	-	-	-	-	-	-	-	-	-
% Moisture	%w/w	1	-	-	-	-	22.0	-	-	-	-	-	29.0	-
3/4-Methylphenol (m/p-cresol)	mg/kg	0.4	-	-	-	-	-	-	-	-	-	-	-	-
TPH														
C6 - C9	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
C10 - C14	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
C15 - C28	mg/kg	45	-	-	-	-	-	-	-	-	-	-	-	-
C29-C36	mg/kg	45	-	-	-	-	-	-	-	-	-	-	-	-
+C10 - C36 (Sum of total)	mg/kg	50	-	-	-	-	-	-	-	-	-	-	-	-
CRC Care TPH Fractions														
C6-C10	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
C10-C16	mg/kg	25	-	-	-	-	-	-	-	-	-	-	-	-
C16-C34	mg/kg	90	-	-	-	-	-	-	-	-	-	-	-	-
C34-C40	mg/kg	100	-	-	-	-	-	-	-	-	-	-	-	-
C10 - C40 (Sum of total)	mg/kg	100	-	-	-	-	-	-	-	-	-	-	-	-
F1: C6-C10 less BTEX	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
F2: >C10-C16 less NAPHTHALENE	mg/kg	25	-	-	-	-	-	-	-	-	-	-	-	-
BTEX														
Naphthalene (VOC)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Xylene (m & p)	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Xylene (o)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Total BTEX	mg/kg	0.6	-	-	-	-	-	-	-	-	-	-	-	-
Xylene Total	mg/kg	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Metals														
Arsenic	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	mg/kg	0.3	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (III+VI)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Copper	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Lead	mg/kg	1	180	150	18	180	150	18	39	72	**59**	54	77	**35**
Mercury	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	mg/kg	2	-	-	-	-	-	-	-	-	-	-	-	-
PAH														
Naphthalene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
2-methylnaphthalene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benz(a)anthracene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b+j)fluoranthene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene TEQ (Zero LOR)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene TEQ (Half LOR)_1	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene TEQ (Full LOR)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
PAHs (Sum of total)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Phenols														
2,4-dimethylphenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
2,4-dinitrophenol	mg/kg	2	-	-	-	-	-	-	-	-	-	-	-	-
2-methylphenol	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
2-nitrophenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	5	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
4-chloro-3-methylphenol	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-
4-nitrophenol	mg/kg	1	-	-	-	-	-	-	-	-	-	-	-	-
Cresol (Total)	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Phenol	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Organochlorine Pesticides														
Organochlorine pesticides IWRG621	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
2,4-DDT	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
4,4-DDE	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
a-BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Aldrin + Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
b-BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (cis)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
d-BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
DDT	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
DDT+DDE+DDD	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endrin	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endrin aldehyde	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Endrin ketone	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	-	-	-	-	-	-
o,p-DDD	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-

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Table 4: RPD Summary Table (Soil Sediment)

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

		Field ID	AHA107 0-0.1	DUP1		AHA107 0-0.1	Trip1		AHA110 0-0.1	DUP4		AHA111 0-0.1	Trip4	
		Matrix Type	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Sample Type	Normal	Field_D		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
		Date	22 Apr 2024	22 Apr 2024		22 Apr 2024	22 Apr 2024		22 Apr 2024	22 Apr 2024		22 Apr 2024	24 Apr 2024	
		Lab Report Number	1091634	1091634	RPD	1091634	SE264540	RPD	1091634	1091634	RPD	1091634	SE264540	RPD
	Unit	EQL												
o,p'-DDE	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Toxaphene	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Organophosphorous Pesticides														
Azinophos methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Bolstar (Sulprofos)	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Bromophos-ethyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Coumaphos	mg/kg	2	-	-	-	-	-	-	-	-	-	-	-	-
Demeton-O	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Demeton-S	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Diazinon	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Dimethoate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Disulfoton	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ethion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ethoprop	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Fenthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Malathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Merphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Mevinphos (Phosdrin)	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Monocrotophos	mg/kg	2	-	-	-	-	-	-	-	-	-	-	-	-
Naled (Dibrom)	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Omethoate	mg/kg	2	-	-	-	-	-	-	-	-	-	-	-	-
Phorate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Ronnel	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Terbufos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Trichloronate	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Herbicides														
Dinoseb	mg/kg	20	-	-	-	-	-	-	-	-	-	-	-	-
Insecticides														
Tokuthion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Pesticides														
Isodrin	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Mirex	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Parathion	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls														
Arochlor 1016	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1221	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1232	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1242	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1248	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1254	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1260	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
Arochlor 1268	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Aroclor 1262	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
PCBs (Sum of total)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	-	-
SVOCs														
EPN	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorocarbons														
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-
Sum of PFHxS and PFOS	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.01	-	-	-	-	-	-	-	-	-	-	-	-
Perfluorooctanoate (PFOA)	mg/kg	0.005	-	-	-	-	-	-	-	-	-	-	-	-

*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: (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 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

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Table 4: RPD Summary Table (Soil Sediment)

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

		Field ID	TP/HA22 0-0.1	DUP3		TP/HA22 0-0.1	Trip3		TP19 0-0.1	DUP2		TP19 0-0.1	Trip2	
		Matrix Type	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Sample Type	Normal	Field_D		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
		Date	24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024	
		Lab Report Number	1091634	1091634	RPD	1091634	SE264540	RPD	1091634	1091634	RPD	1091634	SE264540	RPD
	Unit	EQL												
ES_EPA8100														
Total PAH (NEPM/WHO 16)	mg/kg	0.8	-	-	-	-	<0.8	-	-	-	-	-	<0.8	-
EW_EPA418														
TRH C37-C40	mg/kg	100	-	-	-	-	<100	-	-	-	-	-	<100	-
Halogenated Phenols														
2,4,5-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
2,4,6-trichlorophenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
2,4-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
2,6-dichlorophenol	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
2-chlorophenol	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Pentachlorophenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
tetrachlorophenols	mg/kg	10	-	-	-	-	-	-	<10	<10	0	<10	-	-
NA														
2346&2356-Tetrachlorophenol	mg/kg	1	-	-	-	-	-	-	-	-	-	-	<1	-
Total Halogenated Phenol*	mg/kg	1	-	-	-	-	-	-	<1	<1	0	<1	-	-
Total Non-Halogenated Phenol*	mg/kg	20	-	-	-	-	-	-	<20	<20	0	<20	-	-
Total Other OC VIC EPA	µg/L	100	-	-	-	-	-	-	<100	<100	0	<100	-	-
% Moisture	%w/w	1	-	-	-	-	20.0	-	-	-	-	-	7.8	-
3/4-Methylphenol (m/p-cresol)	mg/kg	0.4	-	-	-	-	-	-	<0.4	<0.4	0	<0.4	<1	0
TPH														
C6 - C9	mg/kg	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
C10 - C14	mg/kg	20	<20	<20	0	<20	<20	0	<20	<20	0	<20	<20	0
C15 - C28	mg/kg	45	<50	<50	0	<50	50	0	<50	<50	0	<50	<45	0
C29-C36	mg/kg	45	<50	<50	0	<50	51	**2**	<50	<50	0	<50	<45	0
+C10 - C36 (Sum of total)	mg/kg	50	<50	<50	0	<50	<110	0	<50	<50	0	<50	<110	0
CRC Care TPH Fractions														
C6-C10	mg/kg	20	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
C10-C16	mg/kg	25	<50	<50	0	<50	<25	0	<50	<50	0	<50	<25	0
C16-C34	mg/kg	90	<100	<100	0	<100	92	0	<100	<100	0	<100	<90	0
C34-C40	mg/kg	100	<100	<100	0	<100	<120	0	<100	<100	0	<100	<120	0
C10 - C40 (Sum of total)	mg/kg	100	<100	<100	0	<100	<210	0	<100	<100	0	<100	<210	0
F1: C6-C10 less BTEX	mg/kg	20	<20	<20	0	<20	<25	0	<20	<20	0	<20	<25	0
F2: >C10-C16 less NAPHTHALENE	mg/kg	25	<50	<50	0	<50	<25	0	<50	<50	0	<50	<25	0
BTEX														
Naphthalene (VOC)	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Toluene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Xylene (o)	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Total BTEX	mg/kg	0.6	-	-	-	-	<0.6	-	-	-	-	-	<0.6	-
Xylene Total	mg/kg	0.3	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0
Metals														
Arsenic	mg/kg	1	4.8	7.5	**44**	4.8	15	**103**	<2	<2	0	<2	1	0
Cadmium	mg/kg	0.3	<0.4	<0.4	0	<0.4	<0.3	0	<0.4	<0.4	0	<0.4	<0.3	0
Chromium (III+VI)	mg/kg	0.5	11	13	**17**	11	15	**31**	33	37	**11**	33	38	**14**
Copper	mg/kg	0.5	6.9	<5	**32**	6.9	4.5	**42**	22	27	**20**	22	25	**13**
Lead	mg/kg	1	8.4	8.8	**5**	8.4	10	**17**	<5	<5	0	<5	3	0
Mercury	mg/kg	0.05	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.1	0	<0.1	<0.05	0
Nickel	mg/kg	0.5	<5	<5	0	<5	3.5	0	23	25	**8**	23	23	0
Zinc	mg/kg	2	30	21	**35**	30	25	**18**	67	56	18	67	61	9
PAH														
Naphthalene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
2-methylnaphthalene	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
1-Methylnaphthalene	mg/kg	0.1	-	-	-	-	<0.1	-	-	-	-	-	<0.1	-
Acenaphthylene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Acenaphthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Fluorene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Phenanthrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Fluoranthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Pyrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benz(a)anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Chrysene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzo(k)fluoranthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzo(b+j)fluoranthene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzo(a)pyrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzo(g,h,i)perylene	mg/kg	0.1	<0.5	<0.5	0	<0.5	<0.1	0	<0.5	<0.5	0	<0.5	<0.1	0
Benzo(a)pyrene TEQ (Zero LOR)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.5	0	<0.5	<0.2	0
Benzo(a)pyrene TEQ (Half LOR)_1	mg/kg	0.5	0.6	0.6	0	0.6	<0.2	**100**	0.6	0.6	0	0.6	<0.2	**100**
Benzo(a)pyrene TEQ (Full LOR)	mg/kg	0.5	1.2	1.2	0	1.2	<0.3	**120**	1.2	1.2	0	1.2	<0.3	**120**
PAHs (Sum of total)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.8	0	<0.5	<0.5	0	<0.5	<0.8	0
Phenols														
2,4-dimethylphenol	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
2,4-dinitrophenol	mg/kg	2	-	-	-	-	-	-	<5	<5	0	<5	<2	0
2-methylphenol	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.5	0
2-nitrophenol	mg/kg	0.5	-	-	-	-	-	-	<1	<1	0	<1	<0.5	0
4,6-Dinitro-2-methylphenol	mg/kg	5	-	-	-	-	-	-	<5	<5	0	<5	-	-
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20	-	-	-	-	-	-	<20	<20	0	<20	-	-
4-chloro-3-methylphenol	mg/kg	1	-	-	-	-	-	-	<1	<1	0	<1	<2	0
4-nitrophenol	mg/kg	1	-	-	-	-	-	-	<5	<5	0	<5	<1	0
Cresol (Total)	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<1.5	0
Phenol	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	<0.5	0
Organochlorine Pesticides														
Organochlorine pesticides IWRG621	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<1	0
2,4-DDT	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
4,4-DDE	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
a-BHC	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Aldrin	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Aldrin + Dieldrin	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	-	-
b-BHC	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Chlordane	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	-	-
Chlordane (cis)	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
gamma-Chlordane	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
d-BHC	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
DDD	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
DDT	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
DDT+DDE+DDD	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	-	-
Dieldrin	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.2	0
Endosulfan I	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.2	0
Endosulfan II	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.2	0
Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Endrin	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.2	0
Endrin aldehyde	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Endrin ketone	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Heptachlor	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Hexachlorobenzene	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
Methoxychlor	mg/kg	0.05	-	-	-	-	-	-	<0.05	<0.05	0	<0.05	<0.1	0
o,p-DDD	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-

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Table 4: RPD Summary Table (Soil Sediment)

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

		Field ID	TP/HA22 0-0.1	DUP3		TP/HA22 0-0.1	Trip3		TP19 0-0.1	DUP2		TP19 0-0.1	Trip2	
		Matrix Type	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
		Sample Type	Normal	Field_D		Normal	Interlab_D		Normal	Field_D		Normal	Interlab_D	
		Date	24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024		24 Apr 2024	24 Apr 2024	
		Lab Report Number	1091634	1091634	RPD	1091634	SE264540	RPD	1091634	1091634	RPD	1091634	SE264540	RPD
	Unit	EQL												
o,p'-DDE	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
Toxaphene	mg/kg	0.5	-	-	-	-	-	-	<0.5	<0.5	0	<0.5	-	-
trans-Nonachlor	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
Organophosphorous Pesticides														
Azinophos methyl	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Bolstar (Sulprofos)	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Bromophos-ethyl	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-
Chlorfenvinphos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Chlorpyrifos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Chlorpyrifos-methyl	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Coumaphos	mg/kg	2	-	-	-	-	-	-	<2	<2	0	<2	-	-
Demeton-O	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Demeton-S	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Diazinon	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.5	0
Dichlorvos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.5	0
Dimethoate	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.5	0
Disulfoton	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Ethion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Ethoprop	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Fenitrothion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Fensulfothion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Fenthion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Malathion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Merphos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Methidathion	mg/kg	0.5	-	-	-	-	-	-	-	-	-	-	<0.5	-
Methyl parathion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Mevinphos (Phosdrin)	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Monocrotophos	mg/kg	2	-	-	-	-	-	-	<2	<2	0	<2	-	-
Naled (Dibrom)	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Omethoate	mg/kg	2	-	-	-	-	-	-	<2	<2	0	<2	-	-
Phorate	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Pyrazophos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Ronnel	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Terbufos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Trichloronate	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Tetrachlorvinphos	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Herbicides														
Dinoseb	mg/kg	20	-	-	-	-	-	-	<20	<20	0	<20	-	-
Insecticides														
Tokuthion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Pesticides														
Isodrin	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
Mirex	mg/kg	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	-
Parathion	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	<0.2	0
Pirimiphos-methyl	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Polychlorinated Biphenyls														
Arochlor 1016	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1221	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1232	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1242	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1248	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1254	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1260	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<0.2	0
Arochlor 1268	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-
Aroclor 1262	mg/kg	0.2	-	-	-	-	-	-	-	-	-	-	<0.2	-
PCBs (Sum of total)	mg/kg	0.1	-	-	-	-	-	-	<0.1	<0.1	0	<0.1	<1	0
SVOCs														
EPN	mg/kg	0.2	-	-	-	-	-	-	<0.2	<0.2	0	<0.2	-	-
Perfluorocarbons														
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	<0.005	-	-
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	<0.005	-	-
Sum of PFHxS and PFOS	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	<0.005	-	-
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.01	-	-	-	-	-	-	<0.01	-	-	<0.01	-	-
Perfluorooctanoate (PFOA)	mg/kg	0.005	-	-	-	-	-	-	<0.005	-	-	<0.005	-	-

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

			Field ID	SED1	SED DUP1	
			Matrix Type	Soil	Soil	
			Sample Type	Normal	Field_D	
			Date	29 Apr 2024	29 Apr 2024	
			Lab Report Number	1092003	1092003	RPD
	Unit	EQL				
ES_EPA8100						
Total PAH (NEPM/WHO 16)	mg/kg	0.8		-	-	-
EW_EPA418						
TRH C37-C40	mg/kg	100		-	-	-
Halogenated Phenols						
2,4,5-trichlorophenol	mg/kg	0.5		<1	<1	0
2,4,6-trichlorophenol	mg/kg	0.5		<1	<1	0
2,4-dichlorophenol	mg/kg	0.5		<0.5	<0.5	0
2,6-dichlorophenol	mg/kg	0.5		<0.5	<0.5	0
2-chlorophenol	mg/kg	0.5		<0.5	<0.5	0
Pentachlorophenol	mg/kg	0.5		<1	<1	0
tetrachlorophenols	mg/kg	10		<10	<10	0
NA						
2346&2356-Tetrachlorophenol	mg/kg	1		-	-	-
Total Halogenated Phenol*	mg/kg	1		<1	<1	0
Total Non-Halogenated Phenol*	mg/kg	20		<20	<20	0
Total Other OC VIC EPA	µg/L	100		<100	<100	0
% Moisture	%w/w	1		-	-	-
3/4-Methylphenol (m/p-cresol)	mg/kg	0.4		<0.4	<0.4	0
TPH						
C6 - C9	mg/kg	20		<20	<20	0
C10 - C14	mg/kg	20		<20	<20	0
C15 - C28	mg/kg	45		<50	<50	0
C29-C36	mg/kg	45		<50	<50	0
+C10 - C36 (Sum of total)	mg/kg	50		<50	<50	0
CRC Care TPH Fractions						
C6-C10	mg/kg	20		<20	<20	0
C10-C16	mg/kg	25		<50	<50	0
C16-C34	mg/kg	90		<100	<100	0
C34-C40	mg/kg	100		<100	<100	0
C10 - C40 (Sum of total)	mg/kg	100		<100	<100	0
F1: C6-C10 less BTEX	mg/kg	20		<20	<20	0
F2: >C10-C16 less NAPHTHALENE	mg/kg	25		<50	<50	0
BTEX						
Naphthalene (VOC)	mg/kg	0.1		<0.5	<0.5	0
Benzene	mg/kg	0.1		<0.1	<0.1	0
Toluene	mg/kg	0.1		<0.1	<0.1	0
Ethylbenzene	mg/kg	0.1		<0.1	<0.1	0
Xylene (m & p)	mg/kg	0.2		<0.2	<0.2	0
Xylene (o)	mg/kg	0.1		<0.1	<0.1	0
Total BTEX	mg/kg	0.6		-	-	-
Xylene Total	mg/kg	0.3		<0.3	<0.3	0
Metals						
Arsenic	mg/kg	1		2.2	2.1	**5**
Cadmium	mg/kg	0.3		<0.4	<0.4	0
Chromium (III+VI)	mg/kg	0.5		6.7	5.5	**20**
Copper	mg/kg	0.5		<5	<5	0
Lead	mg/kg	1		6.3	6.0	**5**
Mercury	mg/kg	0.05		<0.1	<0.1	0
Nickel	mg/kg	0.5		<5	<5	0
Zinc	mg/kg	2		<5	<5	0
PAH						
Naphthalene	mg/kg	0.1		<0.5	<0.5	0
2-methylnaphthalene	mg/kg	0.1		-	-	-
1-Methylnaphthalene	mg/kg	0.1		-	-	-
Acenaphthylene	mg/kg	0.1		<0.5	<0.5	0
Acenaphthene	mg/kg	0.1		<0.5	<0.5	0
Fluorene	mg/kg	0.1		<0.5	<0.5	0
Phenanthrene	mg/kg	0.1		<0.5	<0.5	0
Anthracene	mg/kg	0.1		<0.5	<0.5	0
Fluoranthene	mg/kg	0.1		<0.5	<0.5	0
Pyrene	mg/kg	0.1		<0.5	<0.5	0
Benz(a)anthracene	mg/kg	0.1		<0.5	<0.5	0
Chrysene	mg/kg	0.1		<0.5	<0.5	0
Benzo(k)fluoranthene	mg/kg	0.1		<0.5	<0.5	0
Benzo(b+j)fluoranthene	mg/kg	0.1		<0.5	<0.5	0
Benzo(a)pyrene	mg/kg	0.1		<0.5	<0.5	0
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1		<0.5	<0.5	0
Dibenzo(a,h)anthracene	mg/kg	0.1		<0.5	<0.5	0
Benzo(g,h,i)perylene	mg/kg	0.1		<0.5	<0.5	0
Benzo(a)pyrene TEQ (Zero LOR)	mg/kg	0.5		<0.5	<0.5	0
Benzo(a)pyrene TEQ (Half LOR)_1	mg/kg	0.5		0.6	0.6	0
Benzo(a)pyrene TEQ (Full LOR)	mg/kg	0.5		1.2	1.2	0
PAHs (Sum of total)	mg/kg	0.5		<0.5	<0.5	0
Phenols						
2,4-dimethylphenol	mg/kg	0.5		<0.5	<0.5	0
2,4-dinitrophenol	mg/kg	2		<5	<5	0
2-methylphenol	mg/kg	0.2		<0.2	<0.2	0
2-nitrophenol	mg/kg	0.5		<1	<1	0
4,6-Dinitro-2-methylphenol	mg/kg	5		<5	<5	0
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20		<20	<20	0
4-chloro-3-methylphenol	mg/kg	1		<1	<1	0
4-nitrophenol	mg/kg	1		<5	<5	0
Cresol (Total)	mg/kg	0.5		<0.5	<0.5	0
Phenol	mg/kg	0.5		<0.5	<0.5	0
Organochlorine Pesticides						
Organochlorine pesticides IWRG621	mg/kg	0.1		<0.1	<0.1	0
2,4-DDT	mg/kg	0.1		-	-	-
4,4-DDE	mg/kg	0.05		<0.05	<0.05	0
a-BHC	mg/kg	0.05		<0.05	<0.05	0
Aldrin	mg/kg	0.05		<0.05	<0.05	0
Aldrin + Dieldrin	mg/kg	0.05		<0.05	<0.05	0
b-BHC	mg/kg	0.05		<0.05	<0.05	0
Chlordane	mg/kg	0.1		<0.1	<0.1	0
Chlordane (cis)	mg/kg	0.1		-	-	-
gamma-Chlordane	mg/kg	0.1		-	-	-
d-BHC	mg/kg	0.05		<0.05	<0.05	0
DDD	mg/kg	0.05		<0.05	<0.05	0
DDT	mg/kg	0.05		<0.05	<0.05	0
DDT+DDE+DDD	mg/kg	0.05		<0.05	<0.05	0
Dieldrin	mg/kg	0.05		<0.05	<0.05	0
Endosulfan I	mg/kg	0.05		<0.05	<0.05	0
Endosulfan II	mg/kg	0.05		<0.05	<0.05	0
Endosulfan sulphate	mg/kg	0.05		<0.05	<0.05	0
Endrin	mg/kg	0.05		<0.05	<0.05	0
Endrin aldehyde	mg/kg	0.05		<0.05	<0.05	0
Endrin ketone	mg/kg	0.05		<0.05	<0.05	0
g-BHC (Lindane)	mg/kg	0.05		<0.05	<0.05	0
Heptachlor	mg/kg	0.05		<0.05	<0.05	0
Heptachlor epoxide	mg/kg	0.05		<0.05	<0.05	0
Hexachlorobenzene	mg/kg	0.05		<0.05	<0.05	0
Methoxychlor	mg/kg	0.05		<0.05	<0.05	0
o,p-DDD	mg/kg	0.1		-	-	-

		Field ID	SED1	SED DUP1	
		Matrix Type	Soil	Soil	
		Sample Type	Normal	Field_D	
		Date	29 Apr 2024	29 Apr 2024	
		Lab Report Number	1092003	1092003	RPD
	Unit	EQL			
o,p'-DDE	mg/kg	0.1	-	-	-
Toxaphene	mg/kg	0.5	<0.5	<0.5	0
trans-Nonachlor	mg/kg	0.1	-	-	-
Organophosphorous Pesticides					
Azinophos methyl	mg/kg	0.2	<0.2	<0.2	0
Bolstar (Sulprofos)	mg/kg	0.2	<0.2	<0.2	0
Bromophos-ethyl	mg/kg	0.2	-	-	-
Chlorfenvinphos	mg/kg	0.2	<0.2	<0.2	0
Chlorpyrifos	mg/kg	0.2	<0.2	<0.2	0
Chlorpyrifos-methyl	mg/kg	0.2	<0.2	<0.2	0
Coumaphos	mg/kg	2	<2	<2	0
Demeton-O	mg/kg	0.2	<0.2	<0.2	0
Demeton-S	mg/kg	0.2	<0.2	<0.2	0
Diazinon	mg/kg	0.2	<0.2	<0.2	0
Dichlorvos	mg/kg	0.2	<0.2	<0.2	0
Dimethoate	mg/kg	0.2	<0.2	<0.2	0
Disulfoton	mg/kg	0.2	<0.2	<0.2	0
Ethion	mg/kg	0.2	<0.2	<0.2	0
Ethoprop	mg/kg	0.2	<0.2	<0.2	0
Fenitrothion	mg/kg	0.2	<0.2	<0.2	0
Fensulfothion	mg/kg	0.2	<0.2	<0.2	0
Fenthion	mg/kg	0.2	<0.2	<0.2	0
Malathion	mg/kg	0.2	<0.2	<0.2	0
Merphos	mg/kg	0.2	<0.2	<0.2	0
Methidathion	mg/kg	0.5	-	-	-
Methyl parathion	mg/kg	0.2	<0.2	<0.2	0
Mevinphos (Phosdrin)	mg/kg	0.2	<0.2	<0.2	0
Monocrotophos	mg/kg	2	<2	<2	0
Naled (Dibrom)	mg/kg	0.2	<0.2	<0.2	0
Omethoate	mg/kg	2	<2	<2	0
Phorate	mg/kg	0.2	<0.2	<0.2	0
Pyrazophos	mg/kg	0.2	<0.2	<0.2	0
Ronnel	mg/kg	0.2	<0.2	<0.2	0
Terbufos	mg/kg	0.2	<0.2	<0.2	0
Trichloronate	mg/kg	0.2	<0.2	<0.2	0
Tetrachlorvinphos	mg/kg	0.2	<0.2	<0.2	0
Herbicides					
Dinoseb	mg/kg	20	<20	<20	0
Insecticides					
Tokuthion	mg/kg	0.2	<0.2	<0.2	0
Pesticides					
Isodrin	mg/kg	0.1	-	-	-
Mirex	mg/kg	0.1	-	-	-
Parathion	mg/kg	0.2	<0.2	<0.2	0
Pirimiphos-methyl	mg/kg	0.2	<0.2	<0.2	0
Polychlorinated Biphenyls					
Arochlor 1016	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1221	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1232	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1242	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1248	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1254	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1260	mg/kg	0.1	<0.1	<0.1	0
Arochlor 1268	mg/kg	0.2	-	-	-
Aroclor 1262	mg/kg	0.2	-	-	-
PCBs (Sum of total)	mg/kg	0.1	<0.1	<0.1	0
SVOCs					
EPN	mg/kg	0.2	<0.2	<0.2	0
Perfluorocarbons					
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.005	<0.005	<0.005	0
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.005	<0.005	<0.005	0
Sum of PFHxS and PFOS	mg/kg	0.005	<0.005	<0.005	0
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.01	<0.01	<0.01	0
Perfluorooctanoate (PFOA)	mg/kg	0.005	<0.005	<0.005	0

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

Table 5: RPD Summary Table (Water)

Project: 304100928
Site: Gillieston PS
Detailed Site Investigation

					Lab Report Number	1092003			1092003	SE266735A		1092003	SE266735C	
					Field ID	SW1	DUP1-W		SW1	TRIP1-W		SW1	TRIP1-W	
					Matrix Type	Water	Water		Water	Water		Water	Water	
					Date	29 Apr 2024	29 Apr 2024		29 Apr 2024	29 Apr 2024		29 Apr 2024	29 Apr 2024	
					Sample Type	Normal	Field_D	RPD	Normal	Interlab_D	RPD	Normal	Interlab_D	RPD
		Unit	EQL	RPD										
EW_LEED_MA_1523														
	Perfluoro-n-hexadecanoic acid	µg/L	0.002						<0.002					
NA														
	Arsenic (low-level)	MG/L	0.0005		0.015	0.016	6	0.015			0.015			
	Perfluorododecane sulfonate (PFDoS)	µg/L	0.0005						<0.0005					
	Sum of WA DWER PFAS (n=10)*	UG/L	0.005		0.017	0.016	6	0.017			0.017			
	Total Other OC VIC EPA	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 F	µg/L	0.0005						<0.0005					
	Perfluorobutane sulfonate (PFBS)	µg/L	0.001						<0.001					
	Perfluorononane sulfonate (PFNS)	µg/L	0.0005		<0.001	<0.001	0	<0.001	<0.0005	0	<0.001			
TPH														
	C6 - C9	µg/L	20		<20	<20	0	<20			<20			
	C10 - C14	µg/L	50		<50	<50	0	<50			<50			
	C15 - C28	µg/L	100		<100	<100	0	<100			<100			
	C29-C36	µg/L	100		<100	<100	0	<100			<100			
	+C10 - C36 (Sum of total)	µg/L	100		<100	<100	0	<100			<100			
CRC Care TPH Fractions														
	C6-C10	µg/L	20		<20	<20	0	<20			<20			
	C10-C16	µg/L	50		<50	<50	0	<50			<50			
	C16-C34	µg/L	100		<100	<100	0	<100			<100			
	C34-C40	µg/L	100		<100	<100	0	<100			<100			
	C10 - C40 (Sum of total)	µg/L	100		<100	<100	0	<100			<100			
	F1: C6-C10 less BTEX	µg/L	20		<20	<20	0	<20			<20			
	F2: >C10-C16 less NAPHTHALENE	µg/L	50		<50	<50	0	<50			<50			
BTEX														
	Naphthalene (VOC)	µg/L	10		<10	<10	0	<10			<10			
	Benzene	µg/L	1		<1	<1	0	<1			<1			
	Toluene	µg/L	1		<1	<1	0	<1			<1			
	Ethylbenzene	µg/L	1		<1	<1	0	<1			<1			
	Xylene (m & p)	µg/L	2		<2	<2	0	<2			<2			
	Xylene (o)	µg/L	1		<1	<1	0	<1			<1			
	Xylene Total	ug/L	3		<3	<3	0	<3			<3			
Metals														
	Arsenic	µg/L	0.5		15	16	6	15			15			
	Arsenic (filtered)	µg/L	0.5										1.3	
	Cadmium	µg/L	0.05		<0.2	<0.2	0	<0.2			<0.2			
	Cadmium (filtered)	µg/L	0.05										<0.05	
	Chromium (III+VI)	µg/L	0.5		14	8	55	14			14			
	Chromium (III+VI) (filtered)	µg/L	0.5										0.6	
	Copper	µg/L	1		19	11	53	19			19			
	Copper (filtered)	µg/L	1										2	
	Lead	µg/L	0.2		13	9	36	13			13			
	Lead (filtered)	µg/L	0.2										0.3	
	Mercury	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Mercury (filtered)	µg/L	0.01										<0.1	
	Nickel	µg/L	0.5		9	6	40	9			9			
	Nickel (filtered)	µg/L	0.5										1.5	
	Zinc	µg/L	1		140	80	55	140			140			
	Zinc (filtered)	µg/L	1										13	
Organic														
	Perfluoropropanesulfonic acid (PFPrS)	UG/KG	0.001		<0.001	0.001	0	<0.001			<0.001			
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001		0.004	0.004	0	0.004			0.004			
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001		0.004	0.005	22	0.004			0.004			
PAH														
	Naphthalene	µg/L	0.01		<0.02	<0.02	0	<0.02			<0.02			
	Acenaphthylene	µg/L	0.01		<0.02	<0.01	0	<0.02			<0.02			
	Acenaphthene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Fluorene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Phenanthrene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Anthracene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Fluoranthene	µg/L	0.01		<0.02	<0.02	0	<0.02			<0.02			
	Pyrene	µg/L	0.01		<0.02	<0.02	0	<0.02			<0.02			
	Benz(a)anthracene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Chrysene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Benzo(k)fluoranthene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Benzo(b+j)fluoranthene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Benzo(a)pyrene	mg/L	0.00001		<0.00001	<0.00001	0	<0.00001			<0.00001			
	Indeno(1,2,3-c,d)pyrene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Dibenzo(a,h)anthracene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Benzo(g,h,i)perylene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	PAHs (Sum of total)	µg/L	0.01		<0.02	<0.02	0	<0.02			<0.02			
Organochlorine Pesticides														
	Organochlorine pesticides IWRG621	ug/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	4,4-DDE	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	a-BHC	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Aldrin	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Aldrin + Dieldrin	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	b-BHC	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Chlordane	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	d-BHC	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	DDD	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	DDT	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	DDT+DDE+DDD	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Dieldrin	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endosulfan I	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endosulfan II	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endosulfan sulphate	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endrin	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endrin aldehyde	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Endrin ketone	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	g-BHC (Lindane)	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Heptachlor	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Heptachlor epoxide	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Hexachlorobenzene	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Methoxychlor	µg/L	0.01		<0.01	<0.01	0	<0.01			<0.01			
	Toxaphene	mg/L	0.002		<0.002	<0.002	0	<0.002			<0.002			

				Lab Report Number	1092003			1092003	SE266735A		1092003	SE266735C		
				Field ID	SW1	DUP1-W		SW1	TRIP1-W		SW1	TRIP1-W		
				Matrix Type	Water	Water		Water	Water		Water	Water		
				Date	29 Apr 2024	29 Apr 2024		29 Apr 2024	29 Apr 2024		29 Apr 2024	29 Apr 2024		
				Sample Type	Normal	Field_D	RPD	Normal	Interlab_D	RPD	Normal	Interlab_D	RPD	
		Unit	EQL	RPD										
Organophosphorous Pesticides														
	Azinophos methyl	µg/L	1		<1	<1	0	<1			<1			
	Bolstar (Sulprofos)	µg/L	1		<1	<1	0	<1			<1			
	Chlorfenvinphos	µg/L	1		<1	<1	0	<1			<1			
	Chlorpyrifos	µg/L	10		<10	<10	0	<10			<10			
	Chlorpyrifos-methyl	µg/L	1		<1	<1	0	<1			<1			
	Coumaphos	µg/L	10		<10	<10	0	<10			<10			
	Demeton-O	µg/L	1		<1	<1	0	<1			<1			
	Demeton-S	µg/L	10		<10	<10	0	<10			<10			
	Diazinon	µg/L	1		<1	<1	0	<1			<1			
	Dichlorvos	µg/L	1		<1	<1	0	<1			<1			
	Dimethoate	µg/L	1		<1	<1	0	<1			<1			
	Disulfoton	µg/L	1		<1	<1	0	<1			<1			
	Ethion	µg/L	1		<1	<1	0	<1			<1			
	Ethoprop	µg/L	1		<1	<1	0	<1			<1			
	Fenitrothion	µg/L	1		<1	<1	0	<1			<1			
	Fensulfothion	µg/L	1		<1	<1	0	<1			<1			
	Fenthion	µg/L	1		<1	<1	0	<1			<1			
	Malathion	µg/L	1		<1	<1	0	<1			<1			
	Merphos	mg/L	0.001		<0.001	<0.001	0	<0.001			<0.001			
	Methyl parathion	µg/L	1		<1	<1	0	<1			<1			
	Mevinphos (Phosdrin)	µg/L	1		<1	<1	0	<1			<1			
	Monocrotophos	µg/L	1		<1	<1	0	<1			<1			
	Naled (Dibrom)	µg/L	1		<1	<1	0	<1			<1			
	Omethoate	µg/L	1		<1	<1	0	<1			<1			
	Phorate	µg/L	1		<1	<1	0	<1			<1			
	Pyrazophos	µg/L	1		<1	<1	0	<1			<1			
	Ronnel	µg/L	1		<1	<1	0	<1			<1			
	Terbufos	µg/L	1		<1	<1	0	<1			<1			
	Trichloronate	µg/L	1		<1	<1	0	<1			<1			
	Tetrachlorvinphos	mg/L	0.001		<0.001	<0.001	0	<0.001			<0.001			
Insecticides														
	Tokuthion	µg/L	1		<1	<1	0	<1			<1			
Pesticides														
	Parathion	µg/L	1		<1	<1	0	<1			<1			
	Pirimiphos-methyl	µg/L	10		<10	<10	0	<10			<10			
Polychlorinated Biphenyls														
	Arochlor 1016	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1221	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1232	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1242	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1248	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1254	µg/L	1		<1	<1	0	<1			<1			
	Arochlor 1260	µg/L	1		<1	<1	0	<1			<1			
	PCBs (Sum of total)	µg/L	1		<1	<1	0	<1			<1			
SVOCs														
	EPN	µg/L	1		<1	<1	0	<1			<1			
Perfluorocarbons														
	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		0.002	0.002	0	0.002			0.002			
	Perfluorodecanoic acid (PFDA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.005	<0.005	0	<0.005	<0.002	0	<0.005			
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	8:2 Fluorotelomer sulfonate	µg/L	0.0005		<0.001	<0.001	0	<0.001	<0.0005	0	<0.001			
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005		0.002	0.002	0	0.002	<0.0005	120	0.002			
	Perfluorohexanoic acid (PFHxA)	µg/L	0.0005		0.009	0.007	25	0.009	0.0038	81	0.009			
	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001		<0.001	<0.001	0	<0.001			<0.001			
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.0005		<0.001	<0.001	0	<0.001	<0.0005	0	<0.001			
	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.0025		<0.005	<0.005	0	<0.005	<0.0025	0	<0.005			
	Perfluorobutanoic acid (PFBA)	µg/L	0.0005		<0.01	<0.01	0	<0.01	0.0031	0	<0.01			
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.0002		<0.001	<0.001	0	<0.001	<0.0002	0	<0.001			
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.0002		<0.001	0.001	0	<0.001	0.0003	0	<0.001			
	Perfluorooctane sulfonic acid (PFOS)	µg/L	0.0002		0.002	0.002	0	0.002	0.0011	58	0.002			
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.001	<0.001	0	<0.001	<0.001	0	<0.001			
	Perfluoropentanoic acid (PFPeA)	µg/L	0.0005		<0.01	<0.01	0	<0.01	0.0029	0	<0.01			
	Sum of PFAS	ug/L	0.005		0.017	0.017	0	0.017	0.012	34	0.017			
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.0005		<0.001	<0.001	0	<0.001	<0.0005	0	<0.001			
	Sum of PFHxS and PFOS	µg/L	0.0002		0.002	0.003	40	0.002	0.0013	42	0.002			
	6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.005		<0.005	<0.005	0	<0.005			<0.005			
	Perfluorooctanoate (PFOA)	µg/L	0.0005		0.002	0.002	0	0.002	0.0010	67	0.002			

*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: (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 30 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

Stantec

Table 6: Field Blanks - Soil

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

		Field ID	**TB**		
		Date	**22 Apr 2024**		
		Lab Report Number	**1091634**		
	Unit	EQL			
TPH					
C6 - C9	**mg/kg**	20	<20	<20	<20
CRC Care TPH Fractions					
C6-C10	**mg/kg**	20	<20	<20	<20
F1: C6-C10 less BTEX	**mg/kg**	20	<20	<20	<20
BTEX					
Naphthalene (VOC)	**mg/kg**	0.5	<0.5	<0.5	<0.5
Benzene	**mg/kg**	0.1	<0.1	<0.1	<0.1
Toluene	**mg/kg**	0.1	<0.1	<0.1	<0.1
Ethylbenzene	**mg/kg**	0.1	<0.1	<0.1	<0.1
Xylene (m & p)	**mg/kg**	0.2	<0.2	<0.2	<0.2
Xylene (o)	**mg/kg**	0.1	<0.1	<0.1	<0.1
Xylene Total	**mg/kg**	0.3	<0.3	<0.3	<0.3

Table 7: Field Blanks - Water

Project: 304100928
Site: Gillieston Public School
Detailed Site Investigation

			Field ID	RIN22/4/24	RIN23/4/24	RIN24/4/24	RIN29/4/24
			Date	22 Apr 2024	23 Apr 2024	24 Apr 2024	29 Apr 2024
			Lab Report Number	1091634	1091634	1091634	1092003
	Unit	EQL					
Halogenated Phenols							
2,4,5-trichlorophenol	µg/L	10			<10	<10	
2,4,6-trichlorophenol	µg/L	10			<10	<10	
2,4-dichlorophenol	µg/L	3			<3	<3	
2,6-dichlorophenol	µg/L	3			<3	<3	
2-chlorophenol	µg/L	3			<3	<3	
Pentachlorophenol	µg/L	10			<10	<10	
tetrachlorophenols	µg/L	30			<30	<30	
NA							
Arsenic (low-level)	MG/L	0.0005					<0.0005
Sum of WA DWER PFAS (n=10)*	UG/L	0.005					<0.005
Total Halogenated Phenol*	µg/L	10			<10	<10	
Total Non-Halogenated Phenol*	µg/L	100			<100	<100	
Total Other OC VIC EPA	µg/L	0.01			<2	<2	<0.01
3/4-Methylphenol (m/p-cresol)	mg/L	0.006			<0.006	<0.006	
Perfluorononane sulfonate (PFNS)	µg/L	0.001					<0.001
TPH							
C6 - C9	µg/L	20			<20	<20	<20
C10 - C14	µg/L	50			<50	<50	<50
C15 - C28	µg/L	100			<100	<100	<100
C29-C36	µg/L	100			<100	<100	<100
+C10 - C36 (Sum of total)	µg/L	100			<100	<100	<100
CRC Care TPH Fractions							
C6-C10	µg/L	20			<20	<20	<20
C10-C16	µg/L	50			<50	<50	<50
C16-C34	µg/L	100			<100	<100	<100
C34-C40	µg/L	100			<100	<100	<100
C10 - C40 (Sum of total)	µg/L	100			<100	<100	<100
F1: C6-C10 less BTEX	µg/L	20			<20	<20	<20
F2: >C10-C16 less NAPHTHALENE	µg/L	50			<50	<50	<50
BTEX							
Naphthalene (VOC)	µg/L	10			<10	<10	<10
Benzene	µg/L	1			<1	<1	<1
Toluene	µg/L	1			<1	<1	<1
Ethylbenzene	µg/L	1			<1	<1	<1
Xylene (m & p)	µg/L	2			<2	<2	<2
Xylene (o)	µg/L	1			<1	<1	<1
Xylene Total	ug/L	3			<3	<3	<3
Metals							
Arsenic	µg/L	1			<1	<1	<1
Arsenic (filtered)	µg/L	1					<1
Cadmium	µg/L	0.2			<0.2	<0.2	<0.2
Cadmium (filtered)	µg/L	0.2					<0.2
Chromium (III+VI)	µg/L	1			<1	<1	<1
Chromium (III+VI) (filtered)	µg/L	1					<1
Copper	µg/L	1			<1	<1	<1
Copper (filtered)	µg/L	1					<1
Lead	µg/L	1		<1	<1	<1	<1
Lead (filtered)	µg/L	1					<1
Mercury	µg/L	0.01			<0.1	<0.1	<0.01
Mercury (filtered)	µg/L	0.01					<0.1
Nickel	µg/L	1			<1	<1	<1
Nickel (filtered)	µg/L	1					<1
Zinc	µg/L	5			<5	<5	<5
Zinc (filtered)	µg/L	5					<5
Organic							
Perfluoropropanesulfonic acid (PFPrS)	UG/KG	0.001					<0.001
Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.001			<0.01	<0.01	<0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.001			<0.01	<0.01	<0.001
PAH							
Naphthalene	µg/L	1			<1	<1	
Acenaphthylene	µg/L	1			<1	<1	
Acenaphthene	µg/L	1			<1	<1	
Fluorene	µg/L	1			<1	<1	
Phenanthrene	µg/L	1			<1	<1	
Anthracene	µg/L	1			<1	<1	
Fluoranthene	µg/L	1			<1	<1	
Pyrene	µg/L	1			<1	<1	
Benz(a)anthracene	µg/L	1			<1	<1	
Chrysene	µg/L	1			<1	<1	
Benzo(k)fluoranthene	µg/L	1			<1	<1	
Benzo(b+j)fluoranthene	µg/L	1			<1	<1	
Benzo(a)pyrene	mg/L	0.001			<0.001	<0.001	
Indeno(1,2,3-c,d)pyrene	µg/L	1			<1	<1	
Dibenzo(a,h)anthracene	µg/L	1			<1	<1	
Benzo(g,h,i)perylene	µg/L	1			<1	<1	
PAHs (Sum of total)	µg/L	1			<1	<1	
Phenols							
2,4-dimethylphenol	µg/L	3			<3	<3	
2,4-dinitrophenol	µg/L	30			<30	<30	
2-methylphenol	µg/L	3			<3	<3	
2-nitrophenol	µg/L	10			<10	<10	
4,6-Dinitro-2-methylphenol	ug/L	30			<30	<30	
4,6-Dinitro-o-cyclohexyl phenol	µg/L	100			<100	<100	
4-chloro-3-methylphenol	µg/L	10			<10	<10	
4-nitrophenol	ug/L	30			<30	<30	
Cresol (Total)	mg/L	0.01			<0.01	<0.01	
Phenol	µg/L	3			<3	<3	
Organochlorine Pesticides							
Organochlorine pesticides IWRG621	ug/L	0.01			<2	<2	<0.01
4,4-DDE	µg/L	0.01			<0.2	<0.2	<0.01
a-BHC	µg/L	0.01			<0.2	<0.2	<0.01
Aldrin	µg/L	0.01			<0.2	<0.2	<0.01
Aldrin + Dieldrin	µg/L	0.01			<0.2	<0.2	<0.01
b-BHC	µg/L	0.01			<0.2	<0.2	<0.01
Chlordane	µg/L	0.01			<2	<2	<0.01
d-BHC	µg/L	0.01			<0.2	<0.2	<0.01
DDD	µg/L	0.01			<0.2	<0.2	<0.01
DDT	µg/L	0.01			<0.2	<0.2	<0.01
DDT+DDE+DDD	µg/L	0.01			<0.2	<0.2	<0.01
Dieldrin	µg/L	0.01			<0.2	<0.2	<0.01
Endosulfan I	µg/L	0.01			<0.2	<0.2	<0.01
Endosulfan II	µg/L	0.01			<0.2	<0.2	<0.01
Endosulfan sulphate	µg/L	0.01			<0.2	<0.2	<0.01
Endrin	µg/L	0.01			<0.2	<0.2	<0.01
Endrin aldehyde	µg/L	0.01			<0.2	<0.2	<0.01
Endrin ketone	µg/L	0.01			<0.2	<0.2	<0.01
g-BHC (Lindane)	µg/L	0.01			<0.2	<0.2	<0.01
Heptachlor	µg/L	0.01			<0.2	<0.2	<0.01
Heptachlor epoxide	µg/L	0.01			<0.2	<0.2	<0.01
Hexachlorobenzene	µg/L	0.01			<0.2	<0.2	<0.01

			Field ID	RIN22/4/24	RIN23/4/24	RIN24/4/24	RIN29/4/24
			Date	22 Apr 2024	23 Apr 2024	24 Apr 2024	29 Apr 2024
			Lab Report Number	1091634	1091634	1091634	1092003
	Unit	EQL					
Methoxychlor	µg/L	0.01			<0.2	<0.2	<0.01
Toxaphene	mg/L	0.002			<0.005	<0.005	<0.002
Organophosphorous Pesticides							
Azinophos methyl	µg/L	1			<2	<2	<1
Bolstar (Sulprofos)	µg/L	1			<2	<2	<1
Chlorfenvinphos	µg/L	1			<20	<20	<1
Chlorpyrifos	µg/L	2			<2	<2	<10
Chlorpyrifos-methyl	µg/L	1			<2	<2	<1
Coumaphos	µg/L	10			<20	<20	<10
Demeton-O	µg/L	1			<2	<2	<1
Demeton-S	µg/L	2			<2	<2	<10
Diazinon	µg/L	1			<2	<2	<1
Dichlorvos	µg/L	1			<2	<2	<1
Dimethoate	µg/L	1			<2	<2	<1
Disulfoton	µg/L	1			<2	<2	<1
Ethion	µg/L	1			<2	<2	<1
Ethoprop	µg/L	1			<2	<2	<1
Fenitrothion	µg/L	1			<2	<2	<1
Fensulfothion	µg/L	1			<2	<2	<1
Fenthion	µg/L	1			<2	<2	<1
Malathion	µg/L	1			<2	<2	<1
Merphos	mg/L	0.001			<0.002	<0.002	<0.001
Methyl parathion	µg/L	1			<2	<2	<1
Mevinphos (Phosdrin)	µg/L	1			<2	<2	<1
Monocrotophos	µg/L	1			<2	<2	<1
Naled (Dibrom)	µg/L	1			<2	<2	<1
Omethoate	µg/L	1			<20	<20	<1
Phorate	µg/L	1			<2	<2	<1
Pyrazophos	µg/L	1			<2	<2	<1
Ronnel	µg/L	1			<2	<2	<1
Terbufos	µg/L	1			<2	<2	<1
Trichloronate	µg/L	1			<2	<2	<1
Tetrachlorvinphos	mg/L	0.001			<0.002	<0.002	<0.001
Herbicides							
Dinoseb	µg/L	100			<100	<100	
Insecticides							
Tokuthion	µg/L	1			<2	<2	<1
Pesticides							
Parathion	µg/L	1			<2	<2	<1
Pirimiphos-methyl	µg/L	10			<20	<20	<10
Polychlorinated Biphenyls							
Arochlor 1016	µg/L	1			<5	<5	<1
Arochlor 1221	µg/L	1			<5	<5	<1
Arochlor 1232	µg/L	1			<5	<5	<1
Arochlor 1242	µg/L	1			<5	<5	<1
Arochlor 1248	µg/L	1			<5	<5	<1
Arochlor 1254	µg/L	1			<5	<5	<1
Arochlor 1260	µg/L	1			<5	<5	<1
PCBs (Sum of total)	µg/L	1			<5	<5	<1
SVOCs							
EPN	µg/L	1			<2	<2	<1
Perfluorocarbons							
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	µg/L	0.005					<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005					<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005					<0.005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005					<0.005
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001					<0.001
Perfluorodecanoic acid (PFDA)	µg/L	0.001					<0.001
Perfluorododecanoic acid (PFDoDA)	µg/L	0.001					<0.001
Perfluorononanoic acid (PFNA)	µg/L	0.001					<0.001
Perfluorooctane sulfonamide (FOSA)	µg/L	0.005					<0.005
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001					<0.001
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001					<0.001
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.001					<0.001
8:2 Fluorotelomer sulfonate	µg/L	0.001					<0.001
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001					<0.001
Perfluorohexanoic acid (PFHxA)	µg/L	0.001					<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.001					<0.001
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001					<0.001
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.005					<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.005					<0.005
Perfluorobutanoic acid (PFBA)	µg/L	0.005					<0.005
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001					<0.001
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001			<0.01	<0.01	<0.001
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001			<0.01	<0.01	<0.001
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001					<0.001
Perfluoropentanoic acid (PFPeA)	µg/L	0.001					<0.001
Sum of PFAS	ug/L	0.005					<0.005
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.001					<0.001
Sum of PFHxS and PFOS	µg/L	0.001			<0.01	<0.01	<0.001
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.005			<0.05	<0.05	<0.005
Perfluorooctanoate (PFOA)	µg/L	0.001			<0.01	<0.01	<0.001

APPENDIX F – LABORATORY CERTIFICATES

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

CERTIFICATE OF ANALYSIS 321513

Client Details

Client	Cardno (NSW/ACT) Pty Ltd
Attention	Michael Koerner
Address	PO Box 19, St Leonards, NSW, 1590

Sample Details

Your Reference	**304100982**
Number of Samples	4 Soil
Date samples received	21/04/2023
Date completed instructions received	21/04/2023

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

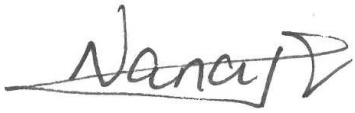
Date results requested by	24/04/2023
Date of Issue	24/04/2023

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
Greta Petzold, Operation Manager
Hannah Nguyen, Metals Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil					
Our Reference		321513-1	321513-2	321513-3	321513-4
Your Reference	UNITS	QA200	QA400	QA600	QA800
Date Sampled		19/04/2023	19/04/2023	19/04/2023	19/04/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	24/04/2023	24/04/2023	24/04/2023	24/04/2023
Date analysed	-	24/04/2023	24/04/2023	24/04/2023	24/04/2023
Lead	mg/kg	9	210	360	16
Zinc	mg/kg	410	340	130	38

Moisture					
Our Reference		321513-1	321513-2	321513-3	321513-4
Your Reference	UNITS	QA200	QA400	QA600	QA800
Date Sampled		19/04/2023	19/04/2023	19/04/2023	19/04/2023
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	19/01/1900 8:52:48 PM	21/04/2023	21/04/2023	21/04/2023
Date analysed	-	19/01/1900 8:52:48 PM	24/04/2023	24/04/2023	24/04/2023
Moisture	%	13	18	20	15

Method ID	Methodology Summary
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.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			24/04/2023	[NT]	[NT]	[NT]	[NT]	24/04/2023	[NT]
Date analysed	-			24/04/2023	[NT]	[NT]	[NT]	[NT]	24/04/2023	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	92	[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.

Stantec

CHAIN OF CUSTODY AND ANALYSIS REQUEST

#982613

Contact Person:	Callum Laker	Project Name:	Gilliestone Public School
Telephone Number:	0417 493 692	Project Number:	304100982
Alternative Contact:	Michael Koerner	PO No.:	
Telephone Number:	0476 978 773	Project Specific Quote No.:	
Sampler:	Michael Koerner	Date results required:	SAME DAY
Email Address (results and invoice):	michael.koerner@cardno.com.au; callum.laker@cardno.com.au	Report format:	Electronic
Address: Level 9 - The Forum, 203 Pacific Highway, St Leonards, New South Wales 2065			

Sample Information						Analysis Required											
Cardno Sample ID	Laboratory Sample ID	No. Containers	Preservation	Date sampled	Matrix	Lead	Nickel	Zinc	Asbestos (w/w%)								
VALC_B01		1	ICE	4/19/2023	SOIL	X		X									
VALC_B02		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_B03		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_B04		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_B05		1	ICE	4/19/2023	SOIL	X		X									
VALC_B06		1	ICE	4/19/2023	SOIL	X		X									
VALC_B07		1	ICE	4/20/2023	SOIL	X		X									
VALC_B08		1	ICE	4/20/2023	SOIL	X		X									
VALC_B09		1	ICE	4/20/2023	SOIL	X		X									
VALC_B10		1	ICE	4/20/2023	SOIL	X		X									
VALC_W01_0.2		1	ICE	4/19/2023	SOIL	X		X									
VALC_W02_0.15		1	ICE	4/19/2023	SOIL	X		X									
VALC_W04_0.3		1	ICE	4/19/2023	SOIL	X		X									
VALC_W05_0.4		1	ICE	4/19/2023	SOIL	X		X									
VALC_W06_0.2		1	ICE	4/19/2023	SOIL	X		X									
VALC_W07_0.4		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_W08_0.25		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_W09_0.45		2	ICE	4/19/2023	SOIL	X		X	X								
VALC_W10_0.1		1	ICE	4/19/2023	SOIL	X		X									
VALC_W11_0.3		1	ICE	4/20/2023	SOIL	X		X									
VALC_W12_0.15		1	ICE	4/20/2023	SOIL	X		X									

SAME DAY TAT

VALC_W14_0.3		1	ICE	4/20/2023	SOIL	X		X									
VALC_W15_0.2		1	ICE	4/20/2023	SOIL	X		X									
VALC_W16_0.1		1	ICE	4/20/2023	SOIL	X		X									
VALN_B01		1	ICE	4/19/2023	SOIL	X		X									
VALN_B02		1	ICE	4/19/2023	SOIL	X		X									
VALN_B03		1	ICE	4/19/2023	SOIL	X		X									
VALN_W01_0.3		1	ICE	4/19/2023	SOIL	X		X									
VALN_W02_0.2		1	ICE	4/19/2023	SOIL	X		X									
VALN_W03_0.1		1	ICE	4/19/2023	SOIL	X		X									
VALN_W04_0.15		1	ICE	4/19/2023	SOIL	X		X									
VALN_W05_0.35		1	ICE	4/19/2023	SOIL	X		X									
VALN_W06_0.15		1	ICE	4/19/2023	SOIL	X		X									
VALN_W07_0.25		1	ICE	4/19/2023	SOIL	X		X									
VALS_B01		1	ICE	4/20/2023	SOIL			X									
VALS_W01_0.2		1	ICE	4/20/2023	SOIL			X									
QA100		1	ICE	4/19/2023	SOIL	X		X									
(1) QA200		1	ICE	4/19/2023	SOIL	X		X									
QA300		1	ICE	4/19/2023	SOIL	X		X									
(2) QA400		1	ICE	4/19/2023	SOIL	X		X									
QA500		1	ICE	4/19/2023	SOIL	X		X									
(3) QA600		1	ICE	4/19/2023	SOIL	X		X									
QA700		1	ICE	4/20/2023	SOIL	X		X									
(4) QA800		1	ICE	4/20/2023	SOIL	X		X									

ENVIROLAB

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

Job No: 321513

Date Received: 21/04/2023

Time Received: 15:20

Received By: [signature]

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

13°C

Please forward to Envirolab

Please forward to Envirolab

Please forward to Envirolab

Please forward to Envirolab

Relinquished by:	Michael Koerner	Received by:	[signature]	Relinquished by:		Received by:	[signature]	Relinquished by:	
(name / company)	Stantec	(name / company)	Envirolab	(name / company		(name / company)	Envirolab	(name / company)	
Date & Time:	4/20/2023 12:51	Date & Time:	4/20/23 4:01	Date & Time:		Date & Time:	21/04/2023 15:20	Date & Time:	
Signature:	MK	Signature:	[signature]	Signature:		Signature:		Signature:	
Received by:		Relinquished by:		Received by:		Relinquished by:		Lab use:	
(name / company)		(name / company)		(name / company		(name / company)		Samples Received: Cool or Ambient (circle one)	
Date & Time:		Date & Time:		Date & Time:		Date & Time:		Temperature Received at: 18.1 (if applicable)	
Signature:		Signature:		Signature:		Signature:		Transported by: Hand delivered / courier	

Request for Laboratory Services and Chain of Custody Form

Delivery Dock 2, 179 Magowar Road, GIRRAWEEN, NSW 2145 Ph: +61 2 9900 8421 Email: EnviroSampleNSW@eurofins.com

Laboratory Section

Received Date: _____ Received By: _____ Cooling Method: ☐ Ice ☐ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: _____ Time of Receipt: _____ Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #:

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: _____ Urgent TA requires lab approval

Notes:

Client Information PO No.: **Project No.: 304100928**

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	Asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	BTEX
	QC100	0.5	19/12/2022	AM/PM	Soil	Jar							
	QC200	0.5	19/12/2022	AM/PM	Soil	Jar	X						
	QC300	0.5	20/12/2022	AM/PM	Soil	Jar							
	QC400	0.2	20/12/2022	AM/PM	Soil	Jar	X						
	QC500	0.1	21/12/2022	AM/PM	Soil	Jar							
	QC600	0.2	21/12/2022	AM/PM	Soil	Jar							
	QC700	0.2	21/12/2022	AM/PM	Soil	Jar							

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:51 PM

Revision #: 1

CONFIDENTIAL

Report # 957232

Received 20/1/2023

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Ongerth**

Report **957232-S**
Project name 304100928
Project ID 304100928
Received Date Jan 20, 2023

Client Sample ID			QC200	G01QC400
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S23-Ja0027496**	**S23-Ja0027497**
Date Sampled			**Dec 19, 2022**	**Dec 20, 2022**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	46
TRH C15-C28	50	mg/kg	< 50	350
TRH C29-C36	50	mg/kg	< 50	230
TRH C10-C36 (Total)	50	mg/kg	< 50	626
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	75
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	75
TRH >C16-C34	100	mg/kg	< 100	490
TRH >C34-C40	100	mg/kg	< 100	130
TRH >C10-C40 (total)*	100	mg/kg	< 100	695
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	121	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
NaphthaleneN02	0.5	mg/kg	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthenN07	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.6

Client Sample ID			QC200	[G01]QC400
Sample Matrix			Soil	Soil
Eurofins Sample No.			S23-Ja0027496	S23-Ja0027497
Date Sampled			Dec 19, 2022	Dec 20, 2022
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	0.6
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	1.2
2-Fluorobiphenyl (surr.)	1	%	99	104
p-Terphenyl-d14 (surr.)	1	%	92	100
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5
a-HCH	0.05	mg/kg	< 0.05	< 0.5
Aldrin	0.05	mg/kg	< 0.05	< 0.5
b-HCH	0.05	mg/kg	< 0.05	< 0.5
d-HCH	0.05	mg/kg	< 0.05	< 0.5
Dieldrin	0.05	mg/kg	< 0.05	< 0.5
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5
Endrin	0.05	mg/kg	< 0.05	< 0.5
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.5
Heptachlor	0.05	mg/kg	< 0.05	< 0.5
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5
Methoxychlor	0.05	mg/kg	< 0.05	< 0.5
Toxaphene	0.5	mg/kg	< 0.5	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 1
Dibutylchlorendate (surr.)	1	%	148	94
Tetrachloro-m-xylene (surr.)	1	%	94	98
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.5
Bolstar	0.2	mg/kg	< 0.2	< 0.5
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.5
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.5
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.5
Coumaphos	2	mg/kg	< 2	< 5
Demeton-S	0.2	mg/kg	< 0.2	< 0.5
Demeton-O	0.2	mg/kg	< 0.2	< 0.5
Diazinon	0.2	mg/kg	< 0.2	< 0.5
Dichlorvos	0.2	mg/kg	< 0.2	< 0.5

Client Sample ID			QC200	[G01]QC400
Sample Matrix			Soil	Soil
Eurofins Sample No.			S23-Ja0027496	S23-Ja0027497
Date Sampled			Dec 19, 2022	Dec 20, 2022
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Dimethoate	0.2	mg/kg	< 0.2	< 0.5
Disulfoton	0.2	mg/kg	< 0.2	< 0.5
EPN	0.2	mg/kg	< 0.2	< 0.5
Ethion	0.2	mg/kg	< 0.2	< 0.5
Ethoprop	0.2	mg/kg	< 0.2	< 0.5
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.5
Fenitrothion	0.2	mg/kg	< 0.2	< 0.5
Fensulfothion	0.2	mg/kg	< 0.2	< 0.5
Fenthion	0.2	mg/kg	< 0.2	< 0.5
Malathion	0.2	mg/kg	< 0.2	< 0.5
Merphos	0.2	mg/kg	< 0.2	< 0.5
Methyl parathion	0.2	mg/kg	< 0.2	< 0.5
Mevinphos	0.2	mg/kg	< 0.2	< 0.5
Monocrotophos	2	mg/kg	< 2	< 5
Naled	0.2	mg/kg	< 0.2	< 0.5
Omethoate	2	mg/kg	< 2	< 5
Phorate	0.2	mg/kg	< 0.2	< 0.5
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.5
Pyrazophos	0.2	mg/kg	< 0.2	< 0.5
Ronnel	0.2	mg/kg	< 0.2	< 0.5
Terbufos	0.2	mg/kg	< 0.2	< 0.5
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.5
Tokuthion	0.2	mg/kg	< 0.2	< 0.5
Trichloronate	0.2	mg/kg	< 0.2	< 0.5
Triphenylphosphate (surr.)	1	%	132	63
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 1
Aroclor-1221	0.1	mg/kg	< 0.1	< 1
Aroclor-1232	0.1	mg/kg	< 0.1	< 1
Aroclor-1242	0.1	mg/kg	< 0.1	< 1
Aroclor-1248	0.1	mg/kg	< 0.1	< 1
Aroclor-1254	0.1	mg/kg	< 0.1	< 1
Aroclor-1260	0.1	mg/kg	< 0.1	< 1
Total PCB*	0.1	mg/kg	< 0.1	< 1
Dibutylchlorendate (surr.)	1	%	148	94
Tetrachloro-m-xylene (surr.)	1	%	94	98
Heavy Metals				
Arsenic	2	mg/kg	< 2	6.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	13
Copper	5	mg/kg	< 5	19
Lead	5	mg/kg	11	320
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	10
Zinc	5	mg/kg	< 5	250
% Moisture	1	%	19	8.4

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jan 20, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Jan 20, 2023	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Jan 20, 2023	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Jan 20, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: 304100928
Project ID: 304100928

Order No.:
Report #: 957232
Phone:
Fax:

Received: Jan 20, 2023 1:00 PM
Due: Jan 23, 2023
Priority: 1 Day
Contact Name: Henry Ongerth

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						HOLD	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	QC200	Dec 19, 2022		Soil	S23-Ja0027496		X	X	X
2	QC400	Dec 20, 2022		Soil	S23-Ja0027497		X	X	X
3	QC100	Dec 20, 2022		Soil	S23-Ja0027498	X			
4	QC300	Dec 20, 2022		Soil	S23-Ja0027499	X			
5	QC500	Dec 20, 2022		Soil	S23-Ja0027500	X			
6	QC600	Dec 20, 2022		Soil	S23-Ja0027501	X			
7	QC700	Dec 20, 2022		Soil	S23-Ja0027502	X			
Test Counts						5	2	2	2

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	105			70-130	Pass	
TRH C10-C14	%	77			70-130	Pass	
TRH C6-C10	%	106			70-130	Pass	
TRH >C10-C16	%	75			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	109			70-130	Pass	
Toluene	%	82			70-130	Pass	
Ethylbenzene	%	88			70-130	Pass	
m&p-Xylenes	%	116			70-130	Pass	
o-Xylene	%	109			70-130	Pass	
Xylenes - Total*	%	114			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	95			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	103			70-130	Pass	
Acenaphthylene	%	96			70-130	Pass	
Anthracene	%	94			70-130	Pass	
Benz(a)anthracene	%	104			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	102			70-130	Pass	
Benzo(g.h.i)perylene	%	108			70-130	Pass	
Benzo(k)fluoranthene	%	107			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	95			70-130	Pass	
Fluoranthene	%	101			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	99			70-130	Pass	
Naphthalene	%	100			70-130	Pass	
Phenanthrene	%	106			70-130	Pass	
Pyrene	%	104			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	80			70-130	Pass	
4.4'-DDD	%	77			70-130	Pass	
4.4'-DDE	%	83			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-HCH	%	79			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	79			70-130	Pass	
b-HCH	%	93			70-130	Pass	
d-HCH	%	83			70-130	Pass	
Dieldrin	%	81			70-130	Pass	
Endosulfan I	%	80			70-130	Pass	
Endosulfan II	%	76			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	91			70-130	Pass	
Endrin aldehyde	%	79			70-130	Pass	
Endrin ketone	%	79			70-130	Pass	
g-HCH (Lindane)	%	84			70-130	Pass	
Heptachlor	%	85			70-130	Pass	
Heptachlor epoxide	%	80			70-130	Pass	
Hexachlorobenzene	%	80			70-130	Pass	
Methoxychlor	%	84			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	98			70-130	Pass	
Dimethoate	%	101			70-130	Pass	
Ethion	%	88			70-130	Pass	
Fenitrothion	%	88			70-130	Pass	
Methyl parathion	%	88			70-130	Pass	
Mevinphos	%	115			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	76			70-130	Pass	
Aroclor-1260	%	104			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	114			80-120	Pass	
Cadmium	%	120			80-120	Pass	
Chromium	%	111			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	116			80-120	Pass	
Mercury	%	119			80-120	Pass	
Nickel	%	111			80-120	Pass	
Zinc	%	105			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S23-Ja0026335	NCP	%	81			70-130	Pass	
TRH C10-C14	S23-Ja0020389	NCP	%	73			70-130	Pass	
TRH C6-C10	S23-Ja0026335	NCP	%	81			70-130	Pass	
TRH >C10-C16	S23-Ja0025160	NCP	%	94			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S23-Ja0026335	NCP	%	98			70-130	Pass	
Toluene	S23-Ja0026335	NCP	%	94			70-130	Pass	
Ethylbenzene	S23-Ja0026335	NCP	%	74			70-130	Pass	
m&p-Xylenes	S23-Ja0026335	NCP	%	97			70-130	Pass	
o-Xylene	S23-Ja0026335	NCP	%	92			70-130	Pass	
Xylenes - Total*	S23-Ja0026335	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	S23-Ja0026335	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S23-Ja0026335	NCP	%	100			75-125	Pass	
Cadmium	S23-Ja0026335	NCP	%	105			75-125	Pass	
Chromium	S23-Ja0026335	NCP	%	94			75-125	Pass	
Copper	S23-Ja0026335	NCP	%	93			75-125	Pass	
Lead	S23-Ja0026335	NCP	%	97			75-125	Pass	
Mercury	S23-Ja0026335	NCP	%	102			75-125	Pass	
Nickel	S23-Ja0026335	NCP	%	96			75-125	Pass	
Zinc	S23-Ja0026335	NCP	%	89			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	N23-Ja0017036	NCP	%	104			70-130	Pass	
Acenaphthylene	N23-Ja0017036	NCP	%	105			70-130	Pass	
Anthracene	N23-Ja0017036	NCP	%	92			70-130	Pass	
Benz(a)anthracene	N23-Ja0017036	NCP	%	91			70-130	Pass	
Benzo(a)pyrene	N23-Ja0017036	NCP	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	N23-Ja0017036	NCP	%	97			70-130	Pass	
Benzo(g.h.i)perylene	N23-Ja0017036	NCP	%	98			70-130	Pass	
Benzo(k)fluoranthene	N23-Ja0017036	NCP	%	98			70-130	Pass	
Chrysene	N23-Ja0017036	NCP	%	70			70-130	Pass	
Dibenz(a.h)anthracene	N23-Ja0017036	NCP	%	100			70-130	Pass	
Fluoranthene	N23-Ja0017036	NCP	%	105			70-130	Pass	
Fluorene	N23-Ja0017036	NCP	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N23-Ja0017036	NCP	%	97			70-130	Pass	
Naphthalene	N23-Ja0017036	NCP	%	105			70-130	Pass	
Phenanthrene	N23-Ja0017036	NCP	%	96			70-130	Pass	
Pyrene	N23-Ja0017036	NCP	%	107			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S23-Ja0024807	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S23-Ja0023561	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S23-Ja0023561	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S23-Ja0023561	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S23-Ja0024807	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S23-Ja0023561	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S23-Ja0023561	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S23-Ja0023561	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S23-Ja0024807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S23-Ja0024807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S23-Ja0024807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S23-Ja0024807	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S23-Ja0024807	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S23-Ja0024807	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-Ja0024807	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S23-Ja0016450	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S23-Ja0016450	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S23-Ja0028009	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S23-Ja0028009	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S23-Ja0028009	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ja0026811	NCP	mg/kg	7.3	8.3	12	30%	Pass	
Cadmium	S23-Ja0026811	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ja0026811	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S23-Ja0026811	NCP	mg/kg	14	24	52	30%	Fail	Q15
Lead	S23-Ja0026811	NCP	mg/kg	20	22	9.8	30%	Pass	
Mercury	S23-Ja0026811	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ja0026811	NCP	mg/kg	11	19	49	30%	Fail	Q15
Zinc	S23-Ja0026811	NCP	mg/kg	130	160	20	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S23-Ja0027447	NCP	%	3.2	4.5	36	30%	Fail	Q15
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S23-Ja0030906	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S23-Ja0030906	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S23-Ja0030906	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S23-Ja0030906	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Hannah Mawbey	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile
Roopesh Rangarajan	Senior Analyst-Organic
Fang Yee Tan	Senior Analyst-Metal



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Request for Laboratory Services and Chain of Custody Form

Delivery Dock 2, 179 Magowar Road, GIRRAWEEN, NSW 2145 Ph: +61 2 9900 8421 Email: EnviroSampleNSW@eurofins.com

Laboratory Section

Received Date: 25/1/23 Received By: [signature] Cooling Method: ☐ Ice ☐ Icepack ☑ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: 5.25 Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☑ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: 0421324022 Fax:

Quote #:

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TA Urgent TA requires lab approval

Notes:

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: [redacted] Lead	asbestos (presence/absence)	[redacted] Zinc	Asbestos quantification (NEPM)	Hold	[redacted] TRH	[redacted]						
1	QC100	0.1	25/01/2023	AM/PM	Soil	Jar	X		X										
2	QC200	0.1	25/01/2023	AM/PM	Soil	Jar	X		X			X							

Sampled By: Henry Ongerth and Claire Corbett **Date:** 25/01/2023

Relinquished By: Henry Ongerth [signature] **Date:** 25/01/23 **Time:** 5:22pm

960232

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Ongerth**

Report **960232-S**
Project name
Project ID 304100928
Received Date Feb 01, 2023

Client Sample ID			**QC100**	**QC200**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S23-Fe0005367**	**S23-Fe0005368**
Date Sampled			**Jan 25, 2023**	**Jan 25, 2023**
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	5	mg/kg	280	420
Zinc	5	mg/kg	210	240
% Moisture	1	%	16	20
Total Recoverable Hydrocarbons				
TRH C6-C9	20	mg/kg	-	< 20
TRH C10-C14	20	mg/kg	-	< 20
TRH C15-C28	50	mg/kg	-	99
TRH C29-C36	50	mg/kg	-	100
TRH C10-C36 (Total)	50	mg/kg	-	199
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20
TRH >C10-C16	50	mg/kg	-	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50
TRH >C16-C34	100	mg/kg	-	170
TRH >C34-C40	100	mg/kg	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	170
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	-	< 0.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Feb 06, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Feb 03, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 06, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 06, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 06, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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NATA# 1261 Site# 1254

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NATA# 1261 Site# 1254

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NATA# 1261 Site# 18217

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Tel: +61 7 3902 4600
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43 Detroit Drive
Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name:
Project ID: 304100928

Order No.:
Report #: 960232
Phone:
Fax:

Received: Feb 1, 2023 4:15 PM
Due: Feb 8, 2023
Priority: 5 Day
Contact Name: Henry Ongerth

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Lead	Zinc	Moisture Set	Total Recoverable Hydrocarbons
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	QC100	Jan 25, 2023		Soil	S23-Fe0005367	X	X	X	
2	QC200	Jan 25, 2023		Soil	S23-Fe0005368	X	X	X	X
Test Counts						2	2	2	1

eurofins | Environment Testing

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Lead	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Heavy Metals							
Lead	%	105			80-120	Pass	
Zinc	%	116			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	123			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
TRH C6-C10	%	117			70-130	Pass	
TRH >C10-C16	%	75			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	118			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	N23-Ja0046061	NCP	%	115			75-125	Pass	
Zinc	S23-Fe0006547	NCP	%	101			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S23-Fe0009280	NCP	%	106			70-130	Pass	
TRH C10-C14	S23-Fe0002141	NCP	%	99			70-130	Pass	
TRH C6-C10	S23-Fe0009280	NCP	%	106			70-130	Pass	
TRH >C10-C16	S23-Fe0002141	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S23-Fe0009280	NCP	%	106			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S23-Fe0005336	NCP	%	30	25	17	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Fe0005368	CP	mg/kg	420	360	15	30%	Pass	
Zinc	S23-Fe0005368	CP	mg/kg	240	220	9.8	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S23-Fe0006008	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S23-Fe0002142	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S23-Fe0002142	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S23-Fe0002142	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S23-Fe0006008	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S23-Fe0002142	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S23-Fe0002142	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S23-Fe0002142	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-Fe0006008	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised by:

Hannah Mawbey	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

3Day

SGS

Page No: 1/4

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 14.2.23 Received By: Laura Lwin Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: Cooler Sealed: ☐ Yes ☐ No ☑ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client Information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
	HA301_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QA110	0.1	10/02/2023	AM/PM	Soil	Jar					X							
	QC110	0.1	10/02/2023	AM/PM	Soil	Jar					X			X				
	HA301_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA302_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA302_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA303_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA303_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA304_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA304_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA305_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA305_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA306_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA306_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA307_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA308_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA308_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA309_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA309_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA310_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA310_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

964020

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 14.2.23 Received By: Laura Lucan Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples Intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: 15:33 Cooler Sealed: ☐ Yes ☐ No ☑ N/A Temperature: ☐ Ambient ☑ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth
Company: Stantec
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au
Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935
Attached Parameter List: ☐ Yes ☐ No
Replacement Sample Containers Required: ☐ Yes ☐ No
Results Required By: Standard TAT Urgent TA requires lab approval
Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information PO No.: Project No.: 304100928

Company Name: Stantec
Contact Name: Henry Ongerth
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Phone Number: 0421324022 After Hours Phone Number:
Fax Number: Email: henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
	HA311_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QA111	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC111	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA311_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA312_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA312_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA313_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA313_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA314_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA314_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA315_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA315_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA316_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA316_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA317_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA317_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA318_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA318_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA319_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA319_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA320_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										

Sampled By: Henry Ongerth Date: 10/02/2023

Relinquished By: Henry Ongerth Date: 13/02/2023 Time: 5:55pm

964020

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Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 14.2.23 Received By: Laura Lvan Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: Cooler Sealed ☐ Yes ☐ No ☑ N/A Temperature: ☐ Ambient ☑ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth
Company: Stantec
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au
Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935
Attached Parameter List: ☐ Yes ☐ No
Replacement Sample Containers Required: ☐ Yes ☐ No
Results Required By: Standard TAT Urgent TA requires lab approval
Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client Information | PO No.: | Project No.: 304100928

Company Name: Stantec
Contact Name: Henry Ongerth
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Phone Number: 0421324022 | **After Hours Phone Number:**
Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
	QA112	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC112	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA320_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA321_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA321_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA322_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA322_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA323_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA323_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA324_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA324_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA325_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QA113	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC113	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA325_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA326_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA326_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA327_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA327_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA328_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA328_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

964020

SGS

Page No: 4/4

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 14-2-23 Received By: Laura Cwan Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: Cooler Sealed: ☐ Yes ☐ No ☑ N/A Temperature: ☐ Ambient ☑ Chilled 8.9°C

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client Information | PO No.: | Project No.: 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 | After Hours Phone Number:

Fax Number: | Email: henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX	TRH		
	HA329_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA329_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA330_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA330_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	HA331_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA331_0.2	0.2	10/02/2023	AM/PM	Soil	ZLB					X							
	HA331-0.2-PACM	0.2	10/02/2023	AM/PM	Soil	ZLB					X							
	HA331_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
	RIN_230210		10/02/2023	AM/PM	Water	Bottle						X	X					
	TAP01		10/02/2023	AM/PM	Water	Bottle						X	X					
	TAP02		10/02/2023	AM/PM	Water	Bottle						X	X					
	TAP03		10/02/2023	AM/PM	Water	Bottle						X	X					
	TS		Lap Prepared	ap Prepare	Soil	Vial									X	X		
	TB		Lap Prepared	ap Prepare	Soil	Vial									X	X		

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

9640 20

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Certificate of Analysis

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Henry Ongerth**

Report **964020-S**
Project name
Project ID 304100928
Received Date Feb 14, 2023

Client Sample ID			**QC111**	**QC112**	**QC113**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Fe0035095**	**S23-Fe0035096**	**S23-Fe0035097**
Date Sampled			**Feb 10, 2023**	**Feb 10, 2023**	**Feb 10, 2023**
Test/Reference	LOR	Unit			
Heavy Metals					
Lead	5	mg/kg	550	260	140
Zinc	5	mg/kg	390	190	200
Sample Properties					
% Moisture	1	%	31	10	6.2

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Feb 22, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Feb 16, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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ABN: 50 005 085 521

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NATA# 1261 Site# 20794

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NATA# 1261
Site# 25079 & 25289

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IANZ# 1327

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Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Order No.:
Report #: 964020
Phone:
Fax:

Received: Feb 14, 2023 4:00 PM
Due: Feb 21, 2023
Priority: 5 Day
Contact Name: Henry Ongerth

Project Name:
Project ID: 304100928

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						HOLD	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	QC111	Feb 10, 2023		Soil	S23-Fe0035095		X	X	X
2	QC112	Feb 10, 2023		Soil	S23-Fe0035096		X	X	X
3	QC113	Feb 10, 2023		Soil	S23-Fe0035097		X	X	X
4	QC110	Feb 10, 2023		Soil	S23-Fe0035098	X			
Test Counts						1	3	3	3

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Lead			mg/kg	< 5			5	Pass	
Zinc			mg/kg	< 5			5	Pass	
LCS - % Recovery									
Heavy Metals									
Lead			%	106			80-120	Pass	
Zinc			%	103			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S23-Fe0047139	NCP	%	92			75-125	Pass	
Zinc	S23-Fe0047139	NCP	%	85			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	W23-Fe0035402	NCP	%	26	22	19	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Fe0035097	CP	mg/kg	140	140	<1	30%	Pass	
Zinc	S23-Fe0035097	CP	mg/kg	200	200	1.9	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised by:

Bonnie Pu	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Stantec

CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Callum Laker	**Project Name:**	Gilliestone Public School
Telephone Number:	0417 493 692	**Project Number:**	304100982
Alternative Contact:	Michael Koerner	**PO No.:**	
Telephone Number:	0476 978 773	**Project Specific Quote No. :**	
Sampler:	Michael Koerner	**Date results required:**	SAME DAY
Email Address (results and invoice):	michael.koerner@cardno.com.au; callum.laker@cardno.com.au	**Report format:**	Electronic
Address: Level 9 - The Forum, 203 Pacific Highway, St Leonards, New South Wales 2065			

Sample Information						Analysis Required												
Cardno Sample ID	Laboratory Sample ID	No. Containers	Preservation	Date sampled	Matrix	Lead	Nickel	Zinc	TRH/BTEXN/PAH/Metals 8/OCP/OPP/PCB	Asbestos (w/w%)								
VALE_W01_0.1		1	ICE	19/04/2023	SOIL	X		X										
VALE_W02_0.35		1	ICE	19/04/2023	SOIL	X		X										
VALE_W03_0.2		1	ICE	19/04/2023	SOIL	X		X										
VALE_W04_0.4		1	ICE	19/04/2023	SOIL	X		X										
VALE_W05_0.2		1	ICE	19/04/2023	SOIL	X		X										
VALE_W06_0.3		1	ICE	19/04/2023	SOIL	X		X										
VALE_W07_0.35		1	ICE	19/04/2023	SOIL	X		X										
VALE_W08_0.1		1	ICE	19/04/2023	SOIL	X		X										
VALE_W09_0.3		1	ICE	19/04/2023	SOIL	X		X										
VALE_W10_0.2		1	ICE	19/04/2023	SOIL	X		X										
VALE_W11_0.2		1	ICE	19/04/2023	SOIL	X		X										
VALE_W12_0.1		1	ICE	19/04/2023	SOIL	X		X										
VALE_B01		1	ICE	19/04/2023	SOIL	X		X										
VALE_B02		1	ICE	19/04/2023	SOIL	X		X										
VALE_B03		1	ICE	19/04/2023	SOIL	X		X										
VALE_B04		1	ICE	19/04/2023	SOIL	X		X										
ANL-1		3	ICE	19/04/2023	SOIL				X	X								
ANL-2		3	ICE	19/04/2023	SOIL				X	X								
ANL-3		3	ICE	19/04/2023	SOIL				X	X								
VAL_B08		1	ICE	19/04/2023	SOIL	X		X										
VAL_B09		1	ICE	19/04/2023	SOIL	X		X										
BAL_B10		1	ICE	19/04/2023	SOIL	X		X										
VAL_W12_0.3		1	ICE	19/04/2023	SOIL	X		X										
VAL_W13_0.1		1	ICE	19/04/2023	SOIL	X		X										
VAL_W14_0.2		1	ICE	19/04/2023	SOIL	X		X										
VAL_W15_0.35		1	ICE	19/04/2023	SOIL	X		X										
VAL_W16_0.2		1	ICE	19/04/2023	SOIL	X		X										
VAL_W17_0.1		1	ICE	19/04/2023	SOIL	X		X										
VAL_W18_0.2		1	ICE	19/04/2023	SOIL	X		X										

SAME DAY TAT

#982292

VAL_W19_0.25		1	ICE	19/04/2023	SOIL	X		X									

Relinquished by:	**Michael Koerner**	**Received by:**	**Relinquished by:**	**Received by:**	**Relinquished by:**
(name / company)	**Stantec**	**(name / company)**	**(name / company**	**(name / company)**	**(name / company)**
Date & Time:	19/04/2023 16:07	**Date & Time:**	**Date & Time:**	**Date & Time:**	**Date & Time:**
Signature:	**MK**	**Signature:**	**Signature:**	**Signature:**	**Signature:**
Received by:		**Relinquished by:**	**Received by:**	**Relinquished by:**	*Lab use:*
(name / company)		**(name / company)**	**(name / company**	**(name / company)**	**Samples Received: Cool or Ambient (circle one)**
Date & Time:		**Date & Time:**	**Date & Time:**	**Date & Time:**	**Temperature Received at: (if applicable)**
Signature:		**Signature:**	**Signature:**	**Signature:**	**Transported by: Hand delivered / courier**

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NATA# 1261
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IANZ# 1327

Christchurch
43 Detroit Drive
Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Sample Receipt Advice

Company name:	Stantec Australia Pty Ltd (NSW/ACT)
Contact name:	Michael Koerner
Project name:	GILLIESTONE HIGH SCHOOL
Project ID:	304100982
Turnaround time:	Overnight
Date/Time received	Apr 19, 2023 6:40 PM
Eurofins reference	982292

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Samples received by the laboratory after 5.30pm are deemed to have been received the following working day.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Michael Koerner - michael.koerner@cardno.com.au.

Note: A copy of these results will also be delivered to the general Stantec Australia Pty Ltd (NSW/ACT) email address.

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web: www.eurofins.com.au
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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
Report #: 982292
Phone:
Fax:

Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	VALE-W01-0.1	Apr 19, 2023		Soil	S23-Ap0040521		X	X	X	
2	VALE-W02-0.35	Apr 19, 2023		Soil	S23-Ap0040522		X	X	X	
3	VALE-W03-0.2	Apr 19, 2023		Soil	S23-Ap0040523		X	X	X	
4	VALE-W04-0.4	Apr 19, 2023		Soil	S23-Ap0040524		X	X	X	
5	VALE-W05-0.2	Apr 19, 2023		Soil	S23-Ap0040525		X	X	X	
6	VALE-W06-0.3	Apr 19, 2023		Soil	S23-Ap0040526		X	X	X	
7	VALE-W07-0.35	Apr 19, 2023		Soil	S23-Ap0040527				X	X
8	VALE-W08-0.1	Apr 19, 2023		Soil	S23-Ap0040528		X	X	X	
9	VALE-W09-0.3	Apr 19, 2023		Soil	S23-Ap0040529		X	X	X	
10	VALE-W10-0.2	Apr 19, 2023		Soil	S23-Ap0040530		X	X	X	
11	VALE-W11-0.2	Apr 19, 2023		Soil	S23-Ap0040531		X	X	X	
12	VALE-W12-0.1	Apr 19, 2023		Soil	S23-Ap0040532		X	X	X	

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14	VALE-B02	Apr 19, 2023		Soil	S23-Ap0040534		X	X	X	
15	VALE-B03	Apr 19, 2023		Soil	S23-Ap0040535		X	X	X	
16	VALE-B04	Apr 19, 2023		Soil	S23-Ap0040536		X	X	X	
17	ANL-1	Apr 19, 2023		Soil	S23-Ap0040537	X			X	X
18	ANL-2	Apr 19, 2023		Soil	S23-Ap0040538	X			X	X
19	ANL-3	Apr 19, 2023		Soil	S23-Ap0040539	X			X	X
20	VAL-B08	Apr 19, 2023		Soil	S23-Ap0040540		X	X	X	
21	VAL-B09	Apr 19, 2023		Soil	S23-Ap0040541		X	X	X	
22	VAL-B10	Apr 19, 2023		Soil	S23-Ap0040542		X	X	X	
23	VAL-W12-0.3	Apr 19, 2023		Soil	S23-Ap0040543		X	X	X	
24	VAL-W13-0.1	Apr 19, 2023		Soil	S23-Ap0040544		X	X	X	
25	VAL-W14-0.2	Apr 19, 2023		Soil	S23-Ap0040545		X	X	X	
26	VAL-W15-0.35	Apr 19, 2023		Soil	S23-Ap0040546		X	X	X	
27	VAL-W16-0.2	Apr 19, 2023		Soil	S23-Ap0040547		X	X	X	
28	VAL-W17-0.1	Apr 19, 2023		Soil	S23-Ap0040548		X	X	X	

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Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
29	VAL-W18-0.2	Apr 19, 2023		Soil	S23-Ap0040549		X	X	X	
30	VAL-W19-0.25	Apr 19, 2023		Soil	S23-Ap0040550		X	X	X	
Test Counts						3	26	26	30	4

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

Attention:	Michael Koerner
Report	982292-AID
Project Name	GILLIESTONE HIGH SCHOOL
Project ID	304100982
Received Date	Apr 19, 2023
Date Reported	Apr 20, 2023

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name GILLIESTONE HIGH SCHOOL
Project ID 304100982
Date Sampled Apr 19, 2023
Report 982292-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ANL-1	23-Ap0040537	Apr 19, 2023	Approximate Sample 189g / >500ml Sample consisted of: Black organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ANL-2	23-Ap0040538	Apr 19, 2023	Approximate Sample 557g Sample consisted of: Beige coarse-grained sandy soil	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ANL-3	23-Ap0040539	Apr 19, 2023	Approximate Sample 100g / >500ml Sample consisted of: Brown wood chips and soil residue	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 19, 2023	Indefinite

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Received: Apr 19, 2023 6:40 PM
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Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	VALE-W01-0.1	Apr 19, 2023		Soil	S23-Ap0040521		X	X	X	
2	VALE-W02-0.35	Apr 19, 2023		Soil	S23-Ap0040522		X	X	X	
3	VALE-W03-0.2	Apr 19, 2023		Soil	S23-Ap0040523		X	X	X	
4	VALE-W04-0.4	Apr 19, 2023		Soil	S23-Ap0040524		X	X	X	
5	VALE-W05-0.2	Apr 19, 2023		Soil	S23-Ap0040525		X	X	X	
6	VALE-W06-0.3	Apr 19, 2023		Soil	S23-Ap0040526		X	X	X	
7	VALE-W07-0.35	Apr 19, 2023		Soil	S23-Ap0040527				X	X
8	VALE-W08-0.1	Apr 19, 2023		Soil	S23-Ap0040528		X	X	X	
9	VALE-W09-0.3	Apr 19, 2023		Soil	S23-Ap0040529		X	X	X	
10	VALE-W10-0.2	Apr 19, 2023		Soil	S23-Ap0040530		X	X	X	
11	VALE-W11-0.2	Apr 19, 2023		Soil	S23-Ap0040531		X	X	X	
12	VALE-W12-0.1	Apr 19, 2023		Soil	S23-Ap0040532		X	X	X	

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15	VALE-B03	Apr 19, 2023		Soil	S23-Ap0040535		X	X	X	
16	VALE-B04	Apr 19, 2023		Soil	S23-Ap0040536		X	X	X	
17	ANL-1	Apr 19, 2023		Soil	S23-Ap0040537	X			X	X
18	ANL-2	Apr 19, 2023		Soil	S23-Ap0040538	X			X	X
19	ANL-3	Apr 19, 2023		Soil	S23-Ap0040539	X			X	X
20	VAL-B08	Apr 19, 2023		Soil	S23-Ap0040540		X	X	X	
21	VAL-B09	Apr 19, 2023		Soil	S23-Ap0040541		X	X	X	
22	VAL-B10	Apr 19, 2023		Soil	S23-Ap0040542		X	X	X	
23	VAL-W12-0.3	Apr 19, 2023		Soil	S23-Ap0040543		X	X	X	
24	VAL-W13-0.1	Apr 19, 2023		Soil	S23-Ap0040544		X	X	X	
25	VAL-W14-0.2	Apr 19, 2023		Soil	S23-Ap0040545		X	X	X	
26	VAL-W15-0.35	Apr 19, 2023		Soil	S23-Ap0040546		X	X	X	
27	VAL-W16-0.2	Apr 19, 2023		Soil	S23-Ap0040547		X	X	X	
28	VAL-W17-0.1	Apr 19, 2023		Soil	S23-Ap0040548		X	X	X	

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
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30	VAL-W19-0.25	Apr 19, 2023		Soil	S23-Ap0040550		X	X	X	
Test Counts						3	26	26	30	4

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
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ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

Attention:	Michael Koerner
Report	982292-AID-V2
Project Name	GILLIESTONE HIGH SCHOOL
Project ID	304100982
Received Date	Apr 19, 2023
Date Reported	Apr 21, 2023

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name GILLIESTONE HIGH SCHOOL
Project ID 304100982
Date Sampled Apr 19, 2023
Report 982292-AID-V2

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ANL-1	23-Ap0040537	Apr 19, 2023	Approximate Sample 189g / >500ml Sample consisted of: Black organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ANL-2	23-Ap0040538	Apr 19, 2023	Approximate Sample 557g Sample consisted of: Beige coarse-grained sandy soil	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ANL-3	23-Ap0040539	Apr 19, 2023	Approximate Sample 100g / >500ml Sample consisted of: Brown wood chips and soil residue	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 19, 2023	Indefinite

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Address: Level 22, 570 Bourke Street
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Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
Report #: 982292
Phone:
Fax:

Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	VALE-W01-0.1	Apr 19, 2023		Soil	S23-Ap0040521		X	X		X	
2	VALE-W02-0.35	Apr 19, 2023		Soil	S23-Ap0040522		X	X		X	
3	VALE-W03-0.2	Apr 19, 2023		Soil	S23-Ap0040523		X	X		X	
4	VALE-W04-0.4	Apr 19, 2023		Soil	S23-Ap0040524		X	X		X	
5	VALE-W05-0.2	Apr 19, 2023		Soil	S23-Ap0040525		X	X		X	
6	VALE-W06-0.3	Apr 19, 2023		Soil	S23-Ap0040526		X	X		X	
7	VALE-W07-0.35	Apr 19, 2023		Soil	S23-Ap0040527					X	X
8	VALE-W08-0.1	Apr 19, 2023		Soil	S23-Ap0040528		X	X		X	
9	VALE-W09-0.3	Apr 19, 2023		Soil	S23-Ap0040529		X	X		X	
10	VALE-W10-0.2	Apr 19, 2023		Soil	S23-Ap0040530		X	X		X	
11	VALE-W11-0.2	Apr 19, 2023		Soil	S23-Ap0040531		X	X		X	
12	VALE-W12-0.1	Apr 19, 2023		Soil	S23-Ap0040532		X	X		X	

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
13	VALE-B01	Apr 19, 2023		Soil	S23-Ap0040533		X	X		X	
14	VALE-B02	Apr 19, 2023		Soil	S23-Ap0040534		X	X		X	
15	VALE-B03	Apr 19, 2023		Soil	S23-Ap0040535		X	X		X	
16	VALE-B04	Apr 19, 2023		Soil	S23-Ap0040536		X	X		X	
17	ANL-1	Apr 19, 2023		Soil	S23-Ap0040537	X			X	X	X
18	ANL-2	Apr 19, 2023		Soil	S23-Ap0040538	X			X	X	X
19	ANL-3	Apr 19, 2023		Soil	S23-Ap0040539	X			X	X	X
20	VAL-B08	Apr 19, 2023		Soil	S23-Ap0040540		X	X		X	
21	VAL-B09	Apr 19, 2023		Soil	S23-Ap0040541		X	X		X	
22	VAL-B10	Apr 19, 2023		Soil	S23-Ap0040542		X	X		X	
23	VAL-W12-0.3	Apr 19, 2023		Soil	S23-Ap0040543		X	X		X	
24	VAL-W13-0.1	Apr 19, 2023		Soil	S23-Ap0040544		X	X		X	
25	VAL-W14-0.2	Apr 19, 2023		Soil	S23-Ap0040545		X	X		X	
26	VAL-W15-0.35	Apr 19, 2023		Soil	S23-Ap0040546		X	X		X	
27	VAL-W16-0.2	Apr 19, 2023		Soil	S23-Ap0040547		X	X		X	
28	VAL-W17-0.1	Apr 19, 2023		Soil	S23-Ap0040548		X	X		X	

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
29	VAL-W18-0.2	Apr 19, 2023		Soil	S23-Ap0040549		X	X		X	
30	VAL-W19-0.25	Apr 19, 2023		Soil	S23-Ap0040550		X	X		X	
Test Counts						3	26	26	3	30	4

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
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g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

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SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Michael Koerner**

Report **982292-S**
Project name GILLIESTONE HIGH SCHOOL
Project ID 304100982
Received Date Apr 19, 2023

Client Sample ID			**VALE-W01-0.1**	**VALE-W02-0.35**	**VALE-W03-0.2**	**VALE-W04-0.4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0040521**	**S23-Ap0040522**	**S23-Ap0040523**	**S23-Ap0040524**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	13	150	270	92
Zinc	5	mg/kg	26	360	260	980
Sample Properties						
% Moisture	1	%	17	22	20	21

Client Sample ID			**VALE-W05-0.2**	**VALE-W06-0.3**	**VALE-W07-0.35**	**VALE-W08-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0040525**	**S23-Ap0040526**	**S23-Ap0040527**	**S23-Ap0040528**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	18	-
Cadmium	0.4	mg/kg	-	-	< 0.4	-
Chromium	5	mg/kg	-	-	20	-
Copper	5	mg/kg	-	-	< 5	-
Lead	5	mg/kg	240	100	28	220
Mercury	0.1	mg/kg	-	-	< 0.1	-
Nickel	5	mg/kg	-	-	< 5	-
Zinc	5	mg/kg	310	250	70	190
Sample Properties						
% Moisture	1	%	17	15	15	21
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-

Client Sample ID			VALE-W05-0.2	VALE-W06-0.3	VALE-W07-0.35	VALE-W08-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040525	S23-Ap0040526	S23-Ap0040527	S23-Ap0040528
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	140	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	91	-
p-Terphenyl-d14 (surr.)	1	%	-	-	85	-

Client Sample ID			VALE-W09-0.3	VALE-W10-0.2	VALE-W11-0.2	VALE-W12-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040529	S23-Ap0040530	S23-Ap0040531	S23-Ap0040532
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	170	260	9.8	54
Zinc	5	mg/kg	120	230	14	170
Sample Properties						
% Moisture	1	%	18	27	21	21

Client Sample ID			VALE-B01	VALE-B02	VALE-B03	VALE-B04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040533	S23-Ap0040534	S23-Ap0040535	S23-Ap0040536
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	8.6	17	310	420
Zinc	5	mg/kg	170	54	250	200
Sample Properties						
% Moisture	1	%	13	15	20	17

Client Sample ID			ANL-1	ANL-2	ANL-3	VAL-B08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040537	S23-Ap0040538	S23-Ap0040539	S23-Ap0040540
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	11	4.1	69	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	18	< 5	85	-
Copper	5	mg/kg	59	< 5	39	-
Lead	5	mg/kg	38	< 5	13	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	9.3	< 5	< 5	-
Zinc	5	mg/kg	540	< 5	36	20
Sample Properties						
% Moisture	1	%	46	2.4	47	19
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	34	< 20	< 20	-
TRH C15-C28	50	mg/kg	190	< 50	150	-
TRH C29-C36	50	mg/kg	510	< 50	160	-
TRH C10-C36 (Total)	50	mg/kg	734	< 50	310	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	52	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	52	< 50	< 50	-
TRH >C16-C34	100	mg/kg	540	< 100	250	-
TRH >C34-C40	100	mg/kg	340	< 100	110	-
TRH >C10-C40 (total)*	100	mg/kg	932	< 100	360	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	106	126	126	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			ANL-1	ANL-2	ANL-3	VAL-B08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040537	S23-Ap0040538	S23-Ap0040539	S23-Ap0040540
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	119	88	96	-
p-Terphenyl-d14 (surr.)	1	%	106	83	83	-

Client Sample ID			VAL-B09	VAL-B10	VAL-W12-0.3	VAL-W13-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040541	S23-Ap0040542	S23-Ap0040543	S23-Ap0040544
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	34	12	55	140
Zinc	5	mg/kg	57	31	33	150
Sample Properties						
% Moisture	1	%	21	18	22	47

Client Sample ID			VAL-W14-0.2	VAL-W15-0.35	VAL-W16-0.2	VAL-W17-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040545	S23-Ap0040546	S23-Ap0040547	S23-Ap0040548
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	14	330	220	920
Zinc	5	mg/kg	35	230	250	590
Sample Properties						
% Moisture	1	%	21	20	22	23

Client Sample ID			VAL-W18-0.2	VAL-W19-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S23-Ap0040549	S23-Ap0040550
Date Sampled			Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	5	mg/kg	73	400
Zinc	5	mg/kg	85	260
Sample Properties				
% Moisture	1	%	24	21

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	Apr 19, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Heavy Metals	Sydney	Apr 19, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Apr 19, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

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Address: Level 22, 570 Bourke Street
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Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
Report #: 982292
Phone:
Fax:

Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	VALE-W01-0.1	Apr 19, 2023		Soil	S23-Ap0040521		X	X	X	
2	VALE-W02-0.35	Apr 19, 2023		Soil	S23-Ap0040522		X	X	X	
3	VALE-W03-0.2	Apr 19, 2023		Soil	S23-Ap0040523		X	X	X	
4	VALE-W04-0.4	Apr 19, 2023		Soil	S23-Ap0040524		X	X	X	
5	VALE-W05-0.2	Apr 19, 2023		Soil	S23-Ap0040525		X	X	X	
6	VALE-W06-0.3	Apr 19, 2023		Soil	S23-Ap0040526		X	X	X	
7	VALE-W07-0.35	Apr 19, 2023		Soil	S23-Ap0040527				X	X
8	VALE-W08-0.1	Apr 19, 2023		Soil	S23-Ap0040528		X	X	X	
9	VALE-W09-0.3	Apr 19, 2023		Soil	S23-Ap0040529		X	X	X	
10	VALE-W10-0.2	Apr 19, 2023		Soil	S23-Ap0040530		X	X	X	
11	VALE-W11-0.2	Apr 19, 2023		Soil	S23-Ap0040531		X	X	X	
12	VALE-W12-0.1	Apr 19, 2023		Soil	S23-Ap0040532		X	X	X	

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Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
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Phone:
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Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
13	VALE-B01	Apr 19, 2023		Soil	S23-Ap0040533		X	X	X	
14	VALE-B02	Apr 19, 2023		Soil	S23-Ap0040534		X	X	X	
15	VALE-B03	Apr 19, 2023		Soil	S23-Ap0040535		X	X	X	
16	VALE-B04	Apr 19, 2023		Soil	S23-Ap0040536		X	X	X	
17	ANL-1	Apr 19, 2023		Soil	S23-Ap0040537	X			X	X
18	ANL-2	Apr 19, 2023		Soil	S23-Ap0040538	X			X	X
19	ANL-3	Apr 19, 2023		Soil	S23-Ap0040539	X			X	X
20	VAL-B08	Apr 19, 2023		Soil	S23-Ap0040540		X	X	X	
21	VAL-B09	Apr 19, 2023		Soil	S23-Ap0040541		X	X	X	
22	VAL-B10	Apr 19, 2023		Soil	S23-Ap0040542		X	X	X	
23	VAL-W12-0.3	Apr 19, 2023		Soil	S23-Ap0040543		X	X	X	
24	VAL-W13-0.1	Apr 19, 2023		Soil	S23-Ap0040544		X	X	X	
25	VAL-W14-0.2	Apr 19, 2023		Soil	S23-Ap0040545		X	X	X	
26	VAL-W15-0.35	Apr 19, 2023		Soil	S23-Ap0040546		X	X	X	
27	VAL-W16-0.2	Apr 19, 2023		Soil	S23-Ap0040547		X	X	X	
28	VAL-W17-0.1	Apr 19, 2023		Soil	S23-Ap0040548		X	X	X	

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Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
Report #: 982292
Phone:
Fax:

Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
29	VAL-W18-0.2	Apr 19, 2023		Soil	S23-Ap0040549		X	X	X	
30	VAL-W19-0.25	Apr 19, 2023		Soil	S23-Ap0040550		X	X	X	
Test Counts						3	26	26	30	4

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium	%	99			80-120	Pass	
Chromium	%	104			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	100			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	90			70-130	Pass	
TRH C10-C14	%	103			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	101			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	116			70-130	Pass	
Toluene	%	113			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	117			70-130	Pass	
o-Xylene	%	117			70-130	Pass	
Xylenes - Total*	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	118			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	86			70-130	Pass	
Acenaphthylene	%	88			70-130	Pass	
Anthracene	%	89			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	
Benzo(b&j)fluoranthene	%	88			70-130	Pass	
Benzo(g.h.i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	91			70-130	Pass	
Chrysene	%	90			70-130	Pass	
Dibenz(a.h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	89			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	75			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	83			70-130	Pass	
Pyrene	%	94			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S23-Ap0040527	CP	%	82			75-125	Pass	
Cadmium	S23-Ap0040527	CP	%	93			75-125	Pass	
Chromium	S23-Ap0040527	CP	%	92			75-125	Pass	
Copper	S23-Ap0040527	CP	%	93			75-125	Pass	
Lead	S23-Ap0040527	CP	%	108			75-125	Pass	
Mercury	S23-Ap0040527	CP	%	92			75-125	Pass	
Nickel	S23-Ap0040527	CP	%	92			75-125	Pass	
Zinc	S23-Ap0040527	CP	%	120			75-125	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S23-Ap0030283	NCP	%	76			70-130	Pass	
TRH C10-C14	S23-Ap0034402	NCP	%	129			70-130	Pass	
TRH C6-C10	S23-Ap0030283	NCP	%	79			70-130	Pass	
TRH >C10-C16	S23-Ap0034402	NCP	%	128			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S23-Ap0030283	NCP	%	107			70-130	Pass	
Toluene	S23-Ap0030283	NCP	%	111			70-130	Pass	
Ethylbenzene	S23-Ap0030283	NCP	%	115			70-130	Pass	
m&p-Xylenes	S23-Ap0030283	NCP	%	113			70-130	Pass	
o-Xylene	S23-Ap0030283	NCP	%	118			70-130	Pass	
Xylenes - Total*	S23-Ap0030283	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S23-Ap0030283	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S23-Ap0036133	NCP	%	86			70-130	Pass	
Acenaphthylene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Anthracene	S23-Ap0036133	NCP	%	92			70-130	Pass	
Benz(a)anthracene	S23-Ap0036133	NCP	%	80			70-130	Pass	
Benzo(a)pyrene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	S23-Ap0036133	NCP	%	77			70-130	Pass	
Benzo(g.h.i)perylene	S23-Ap0036133	NCP	%	78			70-130	Pass	
Benzo(k)fluoranthene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Chrysene	S23-Ap0036133	NCP	%	85			70-130	Pass	
Dibenz(a.h)anthracene	S23-Ap0036133	NCP	%	79			70-130	Pass	
Fluoranthene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Fluorene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S23-Ap0036133	NCP	%	79			70-130	Pass	
Naphthalene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Phenanthrene	S23-Ap0036133	NCP	%	74			70-130	Pass	
Pyrene	S23-Ap0036133	NCP	%	89			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040526	CP	%	15	15	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S23-Ap0027333	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	N23-Ap0020873	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S23-Ap0027333	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N23-Ap0020873	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N23-Ap0020873	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S23-Ap0027333	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S23-Ap0027333	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-Ap0027333	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040537	CP	mg/kg	11	8.9	22	30%	Pass	
Cadmium	S23-Ap0040537	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040537	CP	mg/kg	18	18	1.8	30%	Pass	
Copper	S23-Ap0040537	CP	mg/kg	59	62	5.5	30%	Pass	
Lead	S23-Ap0040537	CP	mg/kg	38	33	14	30%	Pass	
Mercury	S23-Ap0040537	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040537	CP	mg/kg	9.3	8.2	12	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040537	CP	%	46	47	2.4	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040543	CP	mg/kg	8.0	8.1	<1	30%	Pass	
Cadmium	S23-Ap0040543	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040543	CP	mg/kg	17	14	22	30%	Pass	
Copper	S23-Ap0040543	CP	mg/kg	5.8	6.2	6.8	30%	Pass	
Lead	S23-Ap0040543	CP	mg/kg	55	52	5.5	30%	Pass	
Mercury	S23-Ap0040543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040543	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S23-Ap0040543	CP	mg/kg	33	34	4.8	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040547	CP	%	22	20	9.6	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040550	CP	mg/kg	11	11	<1	30%	Pass	
Cadmium	S23-Ap0040550	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040550	CP	mg/kg	17	17	<1	30%	Pass	
Copper	S23-Ap0040550	CP	mg/kg	16	16	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Ap0040550	CP	mg/kg	400	400	<1	30%	Pass	
Mercury	S23-Ap0040550	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040550	CP	mg/kg	5.8	5.8	<1	30%	Pass	
Zinc	S23-Ap0040550	CP	mg/kg	260	260	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Adam Bateup	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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VIC 3000

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Attention: **Michael Koerner**

Report **982292-S-V2**
Project name GILLIESTONE HIGH SCHOOL
Project ID 304100982
Received Date Apr 19, 2023

Client Sample ID			**VALE-W01-0.1**	**VALE-W02-0.35**	**VALE-W03-0.2**	**VALE-W04-0.4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0040521**	**S23-Ap0040522**	**S23-Ap0040523**	**S23-Ap0040524**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	13	150	270	92
Zinc	5	mg/kg	26	360	260	980
Sample Properties						
% Moisture	1	%	17	22	20	21

Client Sample ID			**VALE-W05-0.2**	**VALE-W06-0.3**	**VALE-W07-0.35**	**VALE-W08-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0040525**	**S23-Ap0040526**	**S23-Ap0040527**	**S23-Ap0040528**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	18	-
Cadmium	0.4	mg/kg	-	-	< 0.4	-
Chromium	5	mg/kg	-	-	20	-
Copper	5	mg/kg	-	-	< 5	-
Lead	5	mg/kg	240	100	28	220
Mercury	0.1	mg/kg	-	-	< 0.1	-
Nickel	5	mg/kg	-	-	< 5	-
Zinc	5	mg/kg	310	250	70	190
Sample Properties						
% Moisture	1	%	17	15	15	21
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-

Client Sample ID			VALE-W05-0.2	VALE-W06-0.3	VALE-W07-0.35	VALE-W08-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040525	S23-Ap0040526	S23-Ap0040527	S23-Ap0040528
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	140	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	91	-
p-Terphenyl-d14 (surr.)	1	%	-	-	85	-

Client Sample ID			VALE-W09-0.3	VALE-W10-0.2	VALE-W11-0.2	VALE-W12-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040529	S23-Ap0040530	S23-Ap0040531	S23-Ap0040532
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	170	260	9.8	54
Zinc	5	mg/kg	120	230	14	170
Sample Properties						
% Moisture	1	%	18	27	21	21

Client Sample ID			VALE-B01	VALE-B02	VALE-B03	VALE-B04
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040533	S23-Ap0040534	S23-Ap0040535	S23-Ap0040536
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	8.6	17	310	420
Zinc	5	mg/kg	170	54	250	200
Sample Properties						
% Moisture	1	%	13	15	20	17

Client Sample ID			ANL-1	ANL-2	ANL-3	VAL-B08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040537	S23-Ap0040538	S23-Ap0040539	S23-Ap0040540
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	11	4.1	69	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	18	< 5	85	-
Copper	5	mg/kg	59	< 5	39	-
Lead	5	mg/kg	38	< 5	13	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	9.3	< 5	< 5	-
Zinc	5	mg/kg	540	< 5	36	20
Sample Properties						
% Moisture	1	%	46	2.4	47	19
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	34	< 20	< 20	-
TRH C15-C28	50	mg/kg	190	< 50	150	-
TRH C29-C36	50	mg/kg	510	< 50	160	-
TRH C10-C36 (Total)	50	mg/kg	734	< 50	310	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	52	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	52	< 50	< 50	-
TRH >C16-C34	100	mg/kg	540	< 100	250	-
TRH >C34-C40	100	mg/kg	340	< 100	110	-
TRH >C10-C40 (total)*	100	mg/kg	932	< 100	360	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	106	126	126	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			ANL-1	ANL-2	ANL-3	VAL-B08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040537	S23-Ap0040538	S23-Ap0040539	S23-Ap0040540
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	119	88	96	-
p-Terphenyl-d14 (surr.)	1	%	106	83	83	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.5	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	< 10	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	-
Dibutylchlorendate (surr.)	1	%	93	83	119	-
Tetrachloro-m-xylene (surr.)	1	%	106	85	92	-

Client Sample ID			ANL-1	ANL-2	ANL-3	VAL-B08
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040537	S23-Ap0040538	S23-Ap0040539	S23-Ap0040540
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	< 5	< 2	< 2	-
Demeton-S	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
EPN	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	< 5	< 2	< 2	-
Naled	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Omethoate	2	mg/kg	< 5	< 2	< 2	-
Phorate	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.5	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	90	81	109	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	< 1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	93	83	119	-
Tetrachloro-m-xylene (surr.)	1	%	106	85	92	-

Client Sample ID			VAL-B09	VAL-B10	VAL-W12-0.3	VAL-W13-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040541	S23-Ap0040542	S23-Ap0040543	S23-Ap0040544
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	34	12	55	140
Zinc	5	mg/kg	57	31	33	150
Sample Properties						
% Moisture	1	%	21	18	22	47

Client Sample ID			VAL-W14-0.2	VAL-W15-0.35	VAL-W16-0.2	VAL-W17-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0040545	S23-Ap0040546	S23-Ap0040547	S23-Ap0040548
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	14	330	220	920
Zinc	5	mg/kg	35	230	250	590
Sample Properties						
% Moisture	1	%	21	20	22	23

Client Sample ID			VAL-W18-0.2	VAL-W19-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S23-Ap0040549	S23-Ap0040550
Date Sampled			Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	5	mg/kg	73	400
Zinc	5	mg/kg	85	260
Sample Properties				
% Moisture	1	%	24	21

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	Apr 19, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Apr 19, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Heavy Metals	Sydney	Apr 19, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Apr 19, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Apr 21, 2023	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Apr 21, 2023	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Apr 21, 2023	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: GILLIESTONE HIGH SCHOOL
Project ID: 304100982

Order No.:
Report #: 982292
Phone:
Fax:

Received: Apr 19, 2023 6:40 PM
Due: Apr 20, 2023
Priority: Overnight
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	VALE-W01-0.1	Apr 19, 2023		Soil	S23-Ap0040521		X	X	X	
2	VALE-W02-0.35	Apr 19, 2023		Soil	S23-Ap0040522		X	X	X	
3	VALE-W03-0.2	Apr 19, 2023		Soil	S23-Ap0040523		X	X	X	
4	VALE-W04-0.4	Apr 19, 2023		Soil	S23-Ap0040524		X	X	X	
5	VALE-W05-0.2	Apr 19, 2023		Soil	S23-Ap0040525		X	X	X	
6	VALE-W06-0.3	Apr 19, 2023		Soil	S23-Ap0040526		X	X	X	
7	VALE-W07-0.35	Apr 19, 2023		Soil	S23-Ap0040527				X	X
8	VALE-W08-0.1	Apr 19, 2023		Soil	S23-Ap0040528		X	X	X	
9	VALE-W09-0.3	Apr 19, 2023		Soil	S23-Ap0040529		X	X	X	
10	VALE-W10-0.2	Apr 19, 2023		Soil	S23-Ap0040530		X	X	X	
11	VALE-W11-0.2	Apr 19, 2023		Soil	S23-Ap0040531		X	X	X	
12	VALE-W12-0.1	Apr 19, 2023		Soil	S23-Ap0040532		X	X	X	

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Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
13	VALE-B01	Apr 19, 2023		Soil	S23-Ap0040533		X	X	X	
14	VALE-B02	Apr 19, 2023		Soil	S23-Ap0040534		X	X	X	
15	VALE-B03	Apr 19, 2023		Soil	S23-Ap0040535		X	X	X	
16	VALE-B04	Apr 19, 2023		Soil	S23-Ap0040536		X	X	X	
17	ANL-1	Apr 19, 2023		Soil	S23-Ap0040537	X			X	X
18	ANL-2	Apr 19, 2023		Soil	S23-Ap0040538	X			X	X
19	ANL-3	Apr 19, 2023		Soil	S23-Ap0040539	X			X	X
20	VAL-B08	Apr 19, 2023		Soil	S23-Ap0040540		X	X	X	
21	VAL-B09	Apr 19, 2023		Soil	S23-Ap0040541		X	X	X	
22	VAL-B10	Apr 19, 2023		Soil	S23-Ap0040542		X	X	X	
23	VAL-W12-0.3	Apr 19, 2023		Soil	S23-Ap0040543		X	X	X	
24	VAL-W13-0.1	Apr 19, 2023		Soil	S23-Ap0040544		X	X	X	
25	VAL-W14-0.2	Apr 19, 2023		Soil	S23-Ap0040545		X	X	X	
26	VAL-W15-0.35	Apr 19, 2023		Soil	S23-Ap0040546		X	X	X	
27	VAL-W16-0.2	Apr 19, 2023		Soil	S23-Ap0040547		X	X	X	
28	VAL-W17-0.1	Apr 19, 2023		Soil	S23-Ap0040548		X	X	X	

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Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
29	VAL-W18-0.2	Apr 19, 2023		Soil	S23-Ap0040549		X	X	X	
30	VAL-W19-0.25	Apr 19, 2023		Soil	S23-Ap0040550		X	X	X	
Test Counts						3	26	26	30	4

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	104			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	100			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	90			70-130	Pass	
TRH C10-C14	%	103			70-130	Pass	
TRH C6-C10	%	92			70-130	Pass	
TRH >C10-C16	%	101			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	116			70-130	Pass	
Toluene	%	113			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	117			70-130	Pass	
o-Xylene	%	117			70-130	Pass	
Xylenes - Total*	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	118			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	86			70-130	Pass	
Acenaphthylene	%	88			70-130	Pass	
Anthracene	%	89			70-130	Pass	
Benz(a)anthracene	%	84			70-130	Pass	
Benzo(a)pyrene	%	88			70-130	Pass	
Benzo(b&j)fluoranthene	%	88			70-130	Pass	
Benzo(g.h.i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	91			70-130	Pass	
Chrysene	%	90			70-130	Pass	
Dibenz(a.h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	89			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	75			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	83			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	97			70-130	Pass	
4.4'-DDD	%	122			70-130	Pass	
4.4'-DDE	%	98			70-130	Pass	
4.4'-DDT	%	106			70-130	Pass	
a-HCH	%	91			70-130	Pass	
Aldrin	%	94			70-130	Pass	
b-HCH	%	76			70-130	Pass	
d-HCH	%	89			70-130	Pass	
Dieldrin	%	93			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	117			70-130	Pass	
Endosulfan sulphate	%	85			70-130	Pass	
Endrin	%	107			70-130	Pass	
Endrin aldehyde	%	76			70-130	Pass	
Endrin ketone	%	95			70-130	Pass	
g-HCH (Lindane)	%	102			70-130	Pass	
Heptachlor	%	115			70-130	Pass	
Heptachlor epoxide	%	103			70-130	Pass	
Hexachlorobenzene	%	90			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	89			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Mevinphos	%	102			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	91			70-130	Pass	
Aroclor-1260	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S23-Ap0040527	CP	%	82			75-125	Pass	
Cadmium	S23-Ap0040527	CP	%	93			75-125	Pass	
Chromium	S23-Ap0040527	CP	%	92			75-125	Pass	
Copper	S23-Ap0040527	CP	%	93			75-125	Pass	
Lead	S23-Ap0040527	CP	%	108			75-125	Pass	
Mercury	S23-Ap0040527	CP	%	92			75-125	Pass	
Nickel	S23-Ap0040527	CP	%	92			75-125	Pass	
Zinc	S23-Ap0040527	CP	%	120			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S23-Ap0030283	NCP	%	76			70-130	Pass	
TRH C10-C14	S23-Ap0034402	NCP	%	129			70-130	Pass	
TRH C6-C10	S23-Ap0030283	NCP	%	79			70-130	Pass	
TRH >C10-C16	S23-Ap0034402	NCP	%	128			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S23-Ap0030283	NCP	%	107			70-130	Pass	
Toluene	S23-Ap0030283	NCP	%	111			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	S23-Ap0030283	NCP	%	115			70-130	Pass	
m&p-Xylenes	S23-Ap0030283	NCP	%	113			70-130	Pass	
o-Xylene	S23-Ap0030283	NCP	%	118			70-130	Pass	
Xylenes - Total*	S23-Ap0030283	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S23-Ap0030283	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S23-Ap0036133	NCP	%	86			70-130	Pass	
Acenaphthylene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Anthracene	S23-Ap0036133	NCP	%	92			70-130	Pass	
Benz(a)anthracene	S23-Ap0036133	NCP	%	80			70-130	Pass	
Benzo(a)pyrene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Benzo(b&j)fluoranthene	S23-Ap0036133	NCP	%	77			70-130	Pass	
Benzo(g.h.i)perylene	S23-Ap0036133	NCP	%	78			70-130	Pass	
Benzo(k)fluoranthene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Chrysene	S23-Ap0036133	NCP	%	85			70-130	Pass	
Dibenz(a.h)anthracene	S23-Ap0036133	NCP	%	79			70-130	Pass	
Fluoranthene	S23-Ap0036133	NCP	%	87			70-130	Pass	
Fluorene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S23-Ap0036133	NCP	%	79			70-130	Pass	
Naphthalene	S23-Ap0036133	NCP	%	88			70-130	Pass	
Phenanthrene	S23-Ap0036133	NCP	%	74			70-130	Pass	
Pyrene	S23-Ap0036133	NCP	%	89			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040526	CP	%	15	15	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S23-Ap0027333	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	N23-Ap0020873	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S23-Ap0027333	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	N23-Ap0020873	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N23-Ap0020873	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N23-Ap0020873	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S23-Ap0027333	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S23-Ap0027333	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S23-Ap0027333	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S23-Ap0027333	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N23-Ap0023988	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040537	CP	mg/kg	11	8.9	22	30%	Pass	
Cadmium	S23-Ap0040537	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040537	CP	mg/kg	18	18	1.8	30%	Pass	
Copper	S23-Ap0040537	CP	mg/kg	59	62	5.5	30%	Pass	
Lead	S23-Ap0040537	CP	mg/kg	38	33	14	30%	Pass	
Mercury	S23-Ap0040537	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040537	CP	mg/kg	9.3	8.2	12	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040537	CP	%	46	47	2.4	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040543	CP	mg/kg	8.0	8.1	<1	30%	Pass	
Cadmium	S23-Ap0040543	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040543	CP	mg/kg	17	14	22	30%	Pass	
Copper	S23-Ap0040543	CP	mg/kg	5.8	6.2	6.8	30%	Pass	
Lead	S23-Ap0040543	CP	mg/kg	55	52	5.5	30%	Pass	
Mercury	S23-Ap0040543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040543	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S23-Ap0040543	CP	mg/kg	33	34	4.8	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0040547	CP	%	22	20	9.6	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S23-Ap0040550	CP	mg/kg	11	11	<1	30%	Pass	
Cadmium	S23-Ap0040550	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S23-Ap0040550	CP	mg/kg	17	17	<1	30%	Pass	
Copper	S23-Ap0040550	CP	mg/kg	16	16	<1	30%	Pass	
Lead	S23-Ap0040550	CP	mg/kg	400	400	<1	30%	Pass	
Mercury	S23-Ap0040550	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S23-Ap0040550	CP	mg/kg	5.8	5.8	<1	30%	Pass	
Zinc	S23-Ap0040550	CP	mg/kg	260	260	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Hannah Mawbey	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Volatile
Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Stantec

CHAIN OF CUSTODY AND ANALYSIS REQUEST

#982613

Contact Person:	Callum Laker	Project Name:	Gilliestone Public School
Telephone Number:	0417 493 692	Project Number:	304100982
Alternative Contact:	Michael Koerner	PO No.:	
Telephone Number:	0476 978 773	Project Specific Quote No.:	
Sampler:	Michael Koerner	Date results required:	SAME DAY
Email Address (results and Invoice):	michael.koerner@cardno.com.au; callum.laker@cardno.com.au	Report format:	Electronic
Address: Level 9 - The Forum, 203 Pacific Highway, St Leonards, New South Wales 2065			

Sample information						Analysis Required												
Cardno Sample ID	Laboratory Sample ID	No. Containers	Preservation	Date sampled	Matrix	Lead	Nickel	Zinc	Asbestos (w/w%)									
VALC_B01		1	ICE	4/19/2023	SOIL	X		X										
VALC_B02		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_B03		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_B04		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_B05		1	ICE	4/19/2023	SOIL	X		X										
VALC_B06		1	ICE	4/19/2023	SOIL	X		X										
VALC_B07		1	ICE	4/20/2023	SOIL	X		X										
VALC_B08		1	ICE	4/20/2023	SOIL	X		X										
VALC_B09		1	ICE	4/20/2023	SOIL	X		X										
VALC_B10		1	ICE	4/20/2023	SOIL	X		X										
VALC_W01_0.2		1	ICE	4/19/2023	SOIL	X		X										
VALC_W02_0.15		1	ICE	4/19/2023	SOIL	X		X										
VALC_W04_0.3		1	ICE	4/19/2023	SOIL	X		X										
VALC_W05_0.4		1	ICE	4/19/2023	SOIL	X		X										
VALC_W06_0.2		1	ICE	4/19/2023	SOIL	X		X										
VALC_W07_0.4		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_W08_0.25		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_W09_0.45		2	ICE	4/19/2023	SOIL	X		X	X									
VALC_W10_0.1		1	ICE	4/19/2023	SOIL	X		X										
VALC_W11_0.3		1	ICE	4/20/2023	SOIL	X		X										
VALC_W12_0.15		1	ICE	4/20/2023	SOIL	X		X										
VALC_W13_0.2		1	ICE	4/20/2023	SOIL	X		X										

SAME DAY TAT

VALC_W14_0.3		1	ICE	4/20/2023	SOIL	X		X										
VALC_W15_0.2		1	ICE	4/20/2023	SOIL	X		X										
VALC_W16_0.1		1	ICE	4/20/2023	SOIL	X		X										
VALN_B01		1	ICE	4/19/2023	SOIL	X		X										
VALN_B02		1	ICE	4/19/2023	SOIL	X		X										
VALN_B03		1	ICE	4/19/2023	SOIL	X		X										
VALN_W01_0.3		1	ICE	4/19/2023	SOIL	X		X										
VALN_W02_0.2		1	ICE	4/19/2023	SOIL	X		X										
VALN_W03_0.1		1	ICE	4/19/2023	SOIL	X		X										
VALN_W04_0.15		1	ICE	4/19/2023	SOIL	X		X										
VALN_W05_0.35		1	ICE	4/19/2023	SOIL	X		X										
VALN_W06_0.15		1	ICE	4/19/2023	SOIL	X		X										
VALN_W07_0.25		1	ICE	4/19/2023	SOIL	X		X										
VALS_B01		1	ICE	4/20/2023	SOIL			X										
VALS_W01_0.2		1	ICE	4/20/2023	SOIL			X										
QA100		1	ICE	4/19/2023	SOIL	X		X										
QA200		1	ICE	4/19/2023	SOIL	X		X										Please forward to Envirolab
QA300		1	ICE	4/19/2023	SOIL	X		X										
QA400		1	ICE	4/19/2023	SOIL	X		X										Please forward to Envirolab
QA500		1	ICE	4/19/2023	SOIL	X		X										
QA600		1	ICE	4/19/2023	SOIL	X		X										Please forward to Envirolab
QA700		1	ICE	4/20/2023	SOIL	X		X										
QA800		1	ICE	4/20/2023	SOIL	X		X										Please forward to Envirolab

Relinquished by:	**Michael Koerner**	**Received by:**		**Relinquished by:**	**Received by:**	**Relinquished by:**
(name / company)	**Stantec**	**(name / company)**		**(name / company**	**(name / company)**	**(name / company)**
Date & Time:	4/20/2023 12:51	**Date & Time:**	4/20/23 4:01	**Date & Time:**	**Date & Time:**	**Date & Time:**
Signature:	**MK**	**Signature:**		**Signature:**	**Signature:**	**Signature:**
Received by:		**Relinquished by:**		**Received by:**	**Relinquished by:**	***Lab use:***
(name / company)		**(name / company)**		**(name / company**	**(name / company)**	**Samples Received: Cool or Ambient (circle one)**
Date & Time:		**Date & Time:**		**Date & Time:**	**Date & Time:**	**Temperature Received at: 18.4 (if applicable)**
Signature:		**Signature:**		**Signature:**	**Signature:**	**Transported by: Hand delivered / courier**

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IANZ# 1327	IANZ# 1290

Sample Receipt Advice

Company name:	Stantec Australia Pty Ltd (NSW/ACT)
Contact name:	Michael Koerner
Project name:	GILLIESTAONE PUBLIC SCHOOL
Project ID:	304100982
Turnaround time:	Same day
Date/Time received	Apr 20, 2023 4:01 PM
Eurofins reference	982613

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Sample QA200, QA400, QA600, QA800 forwarded to Envirolab.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Michael Koerner - michael.koerner@cardno.com.au.

Note: A copy of these results will also be delivered to the general Stantec Australia Pty Ltd (NSW/ACT) email address.

eurofins

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email: EnviroSales@eurofins.com

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Melbourne
VIC 3000

Project Name: GILLIESTAONE PUBLIC SCHOOL
Project ID: 304100982

Order No.:
Report #: 982613
Phone:
Fax:

Received: Apr 20, 2023 4:01 PM
Due: Apr 20, 2023
Priority: Same day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	VALC-B01	Apr 19, 2023		Soil	S23-Ap0043342		X	X	X
2	VALC-B02	Apr 19, 2023		Soil	S23-Ap0043343	X	X	X	X
3	VALC-B03	Apr 19, 2023		Soil	S23-Ap0043344	X	X	X	X
4	VALC-B04	Apr 19, 2023		Soil	S23-Ap0043345	X	X	X	X
5	VALC-B05	Apr 19, 2023		Soil	S23-Ap0043346		X	X	X
6	VALC-B06	Apr 19, 2023		Soil	S23-Ap0043347		X	X	X
7	VALC-B07	Apr 19, 2023		Soil	S23-Ap0043348		X	X	X
8	VALC-B08	Apr 19, 2023		Soil	S23-Ap0043349		X	X	X
9	VALC-B09	Apr 19, 2023		Soil	S23-Ap0043350		X	X	X
10	VALC-B10	Apr 19, 2023		Soil	S23-Ap0043351		X	X	X
11	VALC-W01-0.2	Apr 19, 2023		Soil	S23-Ap0043352		X	X	X
12	VALC-W02-0.15	Apr 19, 2023		Soil	S23-Ap0043353		X	X	X

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14	VALC-W05-0.4	Apr 19, 2023		Soil	S23-Ap0043355		X	X	X
15	VALC-W06-0.2	Apr 19, 2023		Soil	S23-Ap0043356		X	X	X
16	VALC-W07-0.4	Apr 19, 2023		Soil	S23-Ap0043357	X	X	X	X
17	VALC-W08-0.25	Apr 19, 2023		Soil	S23-Ap0043358	X	X	X	X
18	VALC-W09-0.45	Apr 19, 2023		Soil	S23-Ap0043359	X	X	X	X
19	VALC-W10-0.1	Apr 19, 2023		Soil	S23-Ap0043360		X	X	X
20	VALC-W11-0.3	Apr 19, 2023		Soil	S23-Ap0043361		X	X	X
21	VALC-W12-0.15	Apr 19, 2023		Soil	S23-Ap0043362		X	X	X
22	VALC-W13-0.2	Apr 19, 2023		Soil	S23-Ap0043363		X	X	X
23	VALC-W14-0.3	Apr 19, 2023		Soil	S23-Ap0043364		X	X	X
24	VALC-W15-0.2	Apr 19, 2023		Soil	S23-Ap0043365		X	X	X
25	VALC-W16-0.1	Apr 19, 2023		Soil	S23-Ap0043366		X	X	X
26	VALN-B01	Apr 19, 2023		Soil	S23-Ap0043367		X	X	X

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
27	VALN-B02	Apr 19, 2023		Soil	S23-Ap0043368		X	X	X
28	VALN-B03	Apr 19, 2023		Soil	S23-Ap0043369		X	X	X
29	VALN-W01-0.3	Apr 19, 2023		Soil	S23-Ap0043370		X	X	X
30	VALN-W02-0.2	Apr 19, 2023		Soil	S23-Ap0043371		X	X	X
31	VALN-W03-0.1	Apr 19, 2023		Soil	S23-Ap0043372		X	X	X
32	VALN-W04-0.15	Apr 19, 2023		Soil	S23-Ap0043373		X	X	X
33	VALN-W05-0.35	Apr 19, 2023		Soil	S23-Ap0043374		X	X	X
34	VALN-W06-0.15	Apr 19, 2023		Soil	S23-Ap0043375		X	X	X
35	VALN-W07-0.25	Apr 19, 2023		Soil	S23-Ap0043376		X	X	X
36	VALS-B01	Apr 19, 2023		Soil	S23-Ap0043377			X	X
37	VALS-W01-0.2	Apr 19, 2023		Soil	S23-Ap0043378			X	X
38	QA100	Apr 19, 2023		Soil	S23-Ap0043379		X	X	X
39	QA300	Apr 19, 2023		Soil	S23-Ap0043380		X	X	X

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
40	QA500	Apr 19, 2023		Soil	S23-Ap0043381		X	X	X
41	QA700	Apr 19, 2023		Soil	S23-Ap0043382		X	X	X
Test Counts						6	39	41	41

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
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Attention:	Michael Koerner
Report	982613-AID
Project Name	GILLIESTONE PUBLIC SCHOOL
Project ID	304100982
Received Date	Apr 20, 2023
Date Reported	Apr 21, 2023

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name GILLIESTONE PUBLIC SCHOOL
Project ID 304100982
Date Sampled Apr 19, 2023
Report 982613-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
VALC-B02	23-Ap0043343	Apr 19, 2023	Approximate Sample 704g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
VALC-B03	23-Ap0043344	Apr 19, 2023	Approximate Sample 711g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
VALC-B04	23-Ap0043345	Apr 19, 2023	Approximate Sample 553g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
VALC-W07-0.4	23-Ap0043357	Apr 19, 2023	Approximate Sample 682g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
VALC-W08-0.25	23-Ap0043358	Apr 19, 2023	Approximate Sample 694g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
VALC-W09-0.45	23-Ap0043359	Apr 19, 2023	Approximate Sample 649g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 20, 2023	Indefinite

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External Laboratory									
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3	VALC-B03	Apr 19, 2023		Soil	S23-Ap0043344	X	X	X	X
4	VALC-B04	Apr 19, 2023		Soil	S23-Ap0043345	X	X	X	X
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16	VALC-W07-0.4	Apr 19, 2023		Soil	S23-Ap0043357	X	X	X	X
17	VALC-W08-0.25	Apr 19, 2023		Soil	S23-Ap0043358	X	X	X	X
18	VALC-W09-0.45	Apr 19, 2023		Soil	S23-Ap0043359	X	X	X	X
19	VALC-W10-0.1	Apr 19, 2023		Soil	S23-Ap0043360		X	X	X
20	VALC-W11-0.3	Apr 19, 2023		Soil	S23-Ap0043361		X	X	X
21	VALC-W12-0.15	Apr 19, 2023		Soil	S23-Ap0043362		X	X	X
22	VALC-W13-0.2	Apr 19, 2023		Soil	S23-Ap0043363		X	X	X
23	VALC-W14-0.3	Apr 19, 2023		Soil	S23-Ap0043364		X	X	X
24	VALC-W15-0.2	Apr 19, 2023		Soil	S23-Ap0043365		X	X	X
25	VALC-W16-0.1	Apr 19, 2023		Soil	S23-Ap0043366		X	X	X
26	VALN-B01	Apr 19, 2023		Soil	S23-Ap0043367		X	X	X

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Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
27	VALN-B02	Apr 19, 2023		Soil	S23-Ap0043368		X	X	X
28	VALN-B03	Apr 19, 2023		Soil	S23-Ap0043369		X	X	X
29	VALN-W01-0.3	Apr 19, 2023		Soil	S23-Ap0043370		X	X	X
30	VALN-W02-0.2	Apr 19, 2023		Soil	S23-Ap0043371		X	X	X
31	VALN-W03-0.1	Apr 19, 2023		Soil	S23-Ap0043372		X	X	X
32	VALN-W04-0.15	Apr 19, 2023		Soil	S23-Ap0043373		X	X	X
33	VALN-W05-0.35	Apr 19, 2023		Soil	S23-Ap0043374		X	X	X
34	VALN-W06-0.15	Apr 19, 2023		Soil	S23-Ap0043375		X	X	X
35	VALN-W07-0.25	Apr 19, 2023		Soil	S23-Ap0043376		X	X	X
36	VALS-B01	Apr 19, 2023		Soil	S23-Ap0043377			X	X
37	VALS-W01-0.2	Apr 19, 2023		Soil	S23-Ap0043378			X	X
38	QA100	Apr 19, 2023		Soil	S23-Ap0043379		X	X	X
39	QA300	Apr 19, 2023		Soil	S23-Ap0043380		X	X	X

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: GILLIESTONE PUBLIC SCHOOL
Project ID: 304100982

Order No.:
Report #: 982613
Phone:
Fax:

Received: Apr 20, 2023 4:01 PM
Due: Apr 21, 2023
Priority: 1 Day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
40	QA500	Apr 19, 2023		Soil	S23-Ap0043381		X	X	X
41	QA700	Apr 19, 2023		Soil	S23-Ap0043382		X	X	X
Test Counts						6	39	41	41

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Bennel Jiri	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
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VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Michael Koerner**

Report **982613-S**
Project name GILLIESTONE PUBLIC SCHOOL
Project ID 304100982
Received Date Apr 20, 2023

Client Sample ID			**VALC-B01**	**VALC-B02**	**VALC-B03**	**VALC-B04**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0043342**	**S23-Ap0043343**	**S23-Ap0043344**	**S23-Ap0043345**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	5.6	34	8.9	33
Zinc	5	mg/kg	290	180	570	390
Sample Properties						
% Moisture	1	%	19	17	17	17

Client Sample ID			**VALC-B05**	**VALC-B06**	**VALC-B07**	**VALC-B08**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0043346**	**S23-Ap0043347**	**S23-Ap0043348**	**S23-Ap0043349**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	280	19	19	7.9
Zinc	5	mg/kg	410	100	87	< 5
Sample Properties						
% Moisture	1	%	17	13	16	17

Client Sample ID			**VALC-B09**	**VALC-B10**	**VALC-W01-0.2**	**VALC-W02-0.15**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0043350**	**S23-Ap0043351**	**S23-Ap0043352**	**S23-Ap0043353**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	26	15	48	410
Zinc	5	mg/kg	120	16	250	840
Sample Properties						
% Moisture	1	%	17	16	18	18

Client Sample ID			VALC-W04-0.3	VALC-W05-0.4	VALC-W06-0.2	VALC-W07-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043354	S23-Ap0043355	S23-Ap0043356	S23-Ap0043357
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	160	150	360	42
Zinc	5	mg/kg	910	800	420	180
Sample Properties						
% Moisture	1	%	15	17	13	17

Client Sample ID			VALC-W08-0.25	VALC-W09-0.45	VALC-W10-0.1	VALC-W11-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043358	S23-Ap0043359	S23-Ap0043360	S23-Ap0043361
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	37	140	340	340
Zinc	5	mg/kg	340	250	230	370
Sample Properties						
% Moisture	1	%	17	15	19	13

Client Sample ID			VALC-W12-0.15	VALC-W13-0.2	VALC-W14-0.3	VALC-W15-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043362	S23-Ap0043363	S23-Ap0043364	S23-Ap0043365
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	150	100	53	67
Zinc	5	mg/kg	490	180	380	110
Sample Properties						
% Moisture	1	%	20	17	15	11

Client Sample ID			VALC-W16-0.1	VALN-B01	VALN-B02	VALN-B03
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043366	S23-Ap0043367	S23-Ap0043368	S23-Ap0043369
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	48	170	500	220
Zinc	5	mg/kg	110	150	200	140
Sample Properties						
% Moisture	1	%	11	13	17	7.3

Client Sample ID			VALN-W01-0.3	VALN-W02-0.2	VALN-W03-0.1	VALN-W04-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043370	S23-Ap0043371	S23-Ap0043372	S23-Ap0043373
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	300	360	100	270
Zinc	5	mg/kg	250	320	91	310
Sample Properties						
% Moisture	1	%	16	11	6.7	13

Client Sample ID			VALN-W05-0.35	VALN-W06-0.15	VALN-W07-0.25	VALS-B01
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043374	S23-Ap0043375	S23-Ap0043376	S23-Ap0043377
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	83	660	200	-
Zinc	5	mg/kg	320	450	160	76
Sample Properties						
% Moisture	1	%	12	9.3	7.9	12

Client Sample ID			VALS-W01-0.2	QA100	QA300	QA500
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S23-Ap0043378	S23-Ap0043379	S23-Ap0043380	S23-Ap0043381
Date Sampled			Apr 19, 2023	Apr 19, 2023	Apr 19, 2023	Apr 19, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	-	9.9	240	550
Zinc	5	mg/kg	64	610	350	170
Sample Properties						
% Moisture	1	%	15	5.0	13	11

Client Sample ID			QA700
Sample Matrix			Soil
Eurofins Sample No.			S23-Ap0043382
Date Sampled			Apr 19, 2023
Test/Reference	LOR	Unit	
Heavy Metals			
Lead	5	mg/kg	15
Zinc	5	mg/kg	79
Sample Properties			
% Moisture	1	%	12

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Heavy Metals	Sydney	Apr 20, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Apr 20, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

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Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	VALC-B01	Apr 19, 2023		Soil	S23-Ap0043342		X	X	X
2	VALC-B02	Apr 19, 2023		Soil	S23-Ap0043343	X	X	X	X
3	VALC-B03	Apr 19, 2023		Soil	S23-Ap0043344	X	X	X	X
4	VALC-B04	Apr 19, 2023		Soil	S23-Ap0043345	X	X	X	X
5	VALC-B05	Apr 19, 2023		Soil	S23-Ap0043346		X	X	X
6	VALC-B06	Apr 19, 2023		Soil	S23-Ap0043347		X	X	X
7	VALC-B07	Apr 19, 2023		Soil	S23-Ap0043348		X	X	X
8	VALC-B08	Apr 19, 2023		Soil	S23-Ap0043349		X	X	X
9	VALC-B09	Apr 19, 2023		Soil	S23-Ap0043350		X	X	X
10	VALC-B10	Apr 19, 2023		Soil	S23-Ap0043351		X	X	X
11	VALC-W01-0.2	Apr 19, 2023		Soil	S23-Ap0043352		X	X	X
12	VALC-W02-0.15	Apr 19, 2023		Soil	S23-Ap0043353		X	X	X

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Project Name: GILLIESTAONE PUBLIC SCHOOL
Project ID: 304100982

Order No.:
Report #: 982613
Phone:
Fax:

Received: Apr 20, 2023 4:01 PM
Due: Apr 20, 2023
Priority: Same day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
13	VALC-W04-0.3	Apr 19, 2023		Soil	S23-Ap0043354		X	X	X
14	VALC-W05-0.4	Apr 19, 2023		Soil	S23-Ap0043355		X	X	X
15	VALC-W06-0.2	Apr 19, 2023		Soil	S23-Ap0043356		X	X	X
16	VALC-W07-0.4	Apr 19, 2023		Soil	S23-Ap0043357	X	X	X	X
17	VALC-W08-0.25	Apr 19, 2023		Soil	S23-Ap0043358	X	X	X	X
18	VALC-W09-0.45	Apr 19, 2023		Soil	S23-Ap0043359	X	X	X	X
19	VALC-W10-0.1	Apr 19, 2023		Soil	S23-Ap0043360		X	X	X
20	VALC-W11-0.3	Apr 19, 2023		Soil	S23-Ap0043361		X	X	X
21	VALC-W12-0.15	Apr 19, 2023		Soil	S23-Ap0043362		X	X	X
22	VALC-W13-0.2	Apr 19, 2023		Soil	S23-Ap0043363		X	X	X
23	VALC-W14-0.3	Apr 19, 2023		Soil	S23-Ap0043364		X	X	X
24	VALC-W15-0.2	Apr 19, 2023		Soil	S23-Ap0043365		X	X	X
25	VALC-W16-0.1	Apr 19, 2023		Soil	S23-Ap0043366		X	X	X
26	VALN-B01	Apr 19, 2023		Soil	S23-Ap0043367		X	X	X

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email: EnviroSales@eurofins.com

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Project Name: GILLIESTAONE PUBLIC SCHOOL
Project ID: 304100982

Order No.:
Report #: 982613
Phone:
Fax:

Received: Apr 20, 2023 4:01 PM
Due: Apr 20, 2023
Priority: Same day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
27	VALN-B02	Apr 19, 2023		Soil	S23-Ap0043368		X	X	X
28	VALN-B03	Apr 19, 2023		Soil	S23-Ap0043369		X	X	X
29	VALN-W01-0.3	Apr 19, 2023		Soil	S23-Ap0043370		X	X	X
30	VALN-W02-0.2	Apr 19, 2023		Soil	S23-Ap0043371		X	X	X
31	VALN-W03-0.1	Apr 19, 2023		Soil	S23-Ap0043372		X	X	X
32	VALN-W04-0.15	Apr 19, 2023		Soil	S23-Ap0043373		X	X	X
33	VALN-W05-0.35	Apr 19, 2023		Soil	S23-Ap0043374		X	X	X
34	VALN-W06-0.15	Apr 19, 2023		Soil	S23-Ap0043375		X	X	X
35	VALN-W07-0.25	Apr 19, 2023		Soil	S23-Ap0043376		X	X	X
36	VALS-B01	Apr 19, 2023		Soil	S23-Ap0043377			X	X
37	VALS-W01-0.2	Apr 19, 2023		Soil	S23-Ap0043378			X	X
38	QA100	Apr 19, 2023		Soil	S23-Ap0043379		X	X	X
39	QA300	Apr 19, 2023		Soil	S23-Ap0043380		X	X	X

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Address: Level 22, 570 Bourke Street
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Project Name: GILLIESTAONE PUBLIC SCHOOL
Project ID: 304100982

Order No.:
Report #: 982613
Phone:
Fax:

Received: Apr 20, 2023 4:01 PM
Due: Apr 20, 2023
Priority: Same day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						Asbestos - WA guidelines	Lead	Zinc	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X
40	QA500	Apr 19, 2023		Soil	S23-Ap0043381		X	X	X
41	QA700	Apr 19, 2023		Soil	S23-Ap0043382		X	X	X
Test Counts						6	39	41	41

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Lead			mg/kg	< 5			5	Pass	
Zinc			mg/kg	< 5			5	Pass	
LCS - % Recovery									
Heavy Metals									
Lead			%	95			80-120	Pass	
Zinc			%	97			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S23-Ap0043342	CP	%	88			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S23-Ap0043372	CP	%	84			75-125	Pass	
Zinc	S23-Ap0043372	CP	%	86			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Ap0043351	CP	mg/kg	15	16	8.9	30%	Pass	
Zinc	S23-Ap0043351	CP	mg/kg	16	11	41	30%	Fail	Q15
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0043351	CP	%	16	16	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Ap0043361	CP	mg/kg	340	350	1.0	30%	Pass	
Zinc	S23-Ap0043361	CP	mg/kg	370	420	13	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0043361	CP	%	13	16	20	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0043371	CP	%	11	14	26	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Ap0043381	CP	mg/kg	550	410	28	30%	Pass	
Zinc	S23-Ap0043381	CP	mg/kg	170	150	13	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S23-Ap0043382	CP	mg/kg	15	17	9.2	30%	Pass	
Zinc	S23-Ap0043382	CP	mg/kg	79	89	12	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0043382	CP	%	12	12	4.1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Hannah Mawbey	Analytical Services Manager
Mickael Ros	Senior Analyst-Metal
Sayeed Abu	Senior Analyst-Asbestos
Fang Yee Tan	Senior Analyst-Metal



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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RE: Eurofins Sample Receipt Advice - Report 982292 : Site GILLIESTONE HIGH SCHOOL (304100982)

Callum Laker <callum.laker@cardno.com.au>

Thu 2023-04-20 9:51 AM

To: #AU25_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>;Michael Koerner <michael.koerner@cardno.com.au>

Cc: Hannah Mawbey <HannahMawbey@eurofins.com>

> **CAUTION:** EXTERNAL EMAIL - Sent from an email domain that is not formally trusted by Eurofins.
>
> Do not click on links or open attachments unless you recognise the sender and are certain that the content is safe.

Hi Eurofins,

Could I please get a silica gel cleanup added to samples ANL-1, ANL-2 and ANL-3?

Could you please also advise how much further this would delay the reporting?

Cheers

Cal

Callum Laker
Senior Environmental Geoscientist

Phone: +61 417 493 692

callum.laker@cardno.com.au

Stantec Australia
Ground Floor, 16 Burelli Street Wollongong New South Wales 2500 Australia
P.O. Box 1285, Wollongong NSW 2500

[http://]Stantec

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Please consider the environment before printing this email.

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Wednesday, 19 April 2023 7:40 PM
To: Michael Koerner <michael.koerner@cardno.com.au>
Cc: Callum Laker <callum.laker@cardno.com.au>
Subject: Eurofins Sample Receipt Advice - Report 982292 : Site GILLIESTONE HIGH SCHOOL (304100982)

Dear Valued Client,

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins | Environment Testing Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Sita Gautam
Sample Receipt

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Girraween, NSW 2145
Phone: +61 02 9900 8421
Email: EnviroSampleNSW@eurofins.com
Website:[http:///]environment.eurofins.com.au

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Sample Receipt Advice

Company name:	Stantec Australia Pty Ltd (NSW/ACT)
Contact name:	Callum Laker
Project name:	ADDITIONAL: GILLIESTONE HIGH SCHOOL
Project ID:	ADDITIONAL: 304100982
Turnaround time:	1 Day
Date/Time received	Apr 20, 2023 9:51 AM
Eurofins reference	982718

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Hannah Mawbey on phone : or by email: HannahMawbey@eurofins.com

Results will be delivered electronically via email to Callum Laker - callum.laker@cardno.com.au.

Note: A copy of these results will also be delivered to the general Stantec Australia Pty Ltd (NSW/ACT) email address.

Global Leader - Results you can trust

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

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VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261 Site# 1254	NATA# 1261 Site# 25403	NATA# 1261 Site# 18217	NATA# 1261 Site# 25466	NATA# 1261 Site# 20794	Site# 25079 & 25289

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IANZ# 1327	IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Order No.:
Report #: 982718
Phone:
Fax:

Received: Apr 20, 2023 9:51 AM
Due: Apr 21, 2023
Priority: 1 Day
Contact Name: Callum Laker

Project Name: ADDITIONAL: GILLIESTONE HIGH SCHOOL
Project ID: ADDITIONAL: 304100982

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						TRH (after Silica Gel cleanup)	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	ANL-1	Apr 19, 2023		Soil	S23-Ap0044214	X	X
2	ANL-2	Apr 19, 2023		Soil	S23-Ap0044215	X	X
3	ANL-3	Apr 19, 2023		Soil	S23-Ap0044216	X	X
Test Counts						3	3

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Callum Laker**

Report **982718-S**
Project name ADDITIONAL: GILLIESTONE HIGH SCHOOL
Project ID ADDITIONAL: 304100982
Received Date Apr 20, 2023

Client Sample ID			[G01] **ANL-1**	**ANL-2**	[G01] **ANL-3**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S23-Ap0044214**	**S23-Ap0044215**	**S23-Ap0044216**
Date Sampled			**Apr 19, 2023**	**Apr 19, 2023**	**Apr 19, 2023**
Test/Reference	LOR	Unit			
TRH - 2013 NEPM Fractions (after silica gel clean-up)					
TRH >C10-C16 (after silica gel clean-up)	50	mg/kg	< 250	< 50	< 250
TRH >C16-C34 (after silica gel clean-up)	100	mg/kg	< 500	< 100	< 500
TRH >C34-C40 (after silica gel clean-up)	100	mg/kg	< 500	< 100	< 500
TRH >C10-C40 (total) (after silica-gel clean up)*	100	mg/kg	< 500	< 100	< 500
TRH - 1999 NEPM Fractions (after silica gel clean-up)					
TRH C10-C14 (after silica gel clean-up)	50	mg/kg	< 100	< 50	< 100
TRH C15-C28 (after silica gel clean-up)	100	mg/kg	< 250	< 100	< 250
TRH C29-C36 (after silica gel clean-up)	100	mg/kg	< 250	< 100	< 250
TRH C10-C36 (Total) (after silica gel clean-up)	100	mg/kg	< 250	< 100	< 250
Sample Properties					
% Moisture	1	%	40	2.5	43

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Sydney	Apr 20, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Sydney	Apr 20, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Sydney	Apr 20, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			

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NATA# 1261 Site# 1254

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NATA# 1261 Site# 25403

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Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

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Mitchell
ACT 2911
Tel: +61 2 6113 8091
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Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

Newcastle
1/2 Frost Drive
Mayfield West NSW 2304
Tel: +61 2 4968 8448
NATA# 1261
Site# 25079 & 25289

Eurofins ARL Pty Ltd
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NZBN: 9429046024954

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Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

Christchurch
43 Detroit Drive
Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 22, 570 Bourke Street
Melbourne
VIC 3000

Order No.:
Report #: 982718
Phone:
Fax:

Received: Apr 20, 2023 9:51 AM
Due: Apr 21, 2023
Priority: 1 Day
Contact Name: Callum Laker

Project Name: ADDITIONAL: GILLIESTONE HIGH SCHOOL
Project ID: ADDITIONAL: 304100982

Eurofins Analytical Services Manager : Hannah Mawbey

Sample Detail						TRH (after Silica Gel cleanup)	Moisture Set
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	ANL-1	Apr 19, 2023		Soil	S23-Ap0044214	X	X
2	ANL-2	Apr 19, 2023		Soil	S23-Ap0044215	X	X
3	ANL-3	Apr 19, 2023		Soil	S23-Ap0044216	X	X
Test Counts						3	3

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/kg	< 50			50	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/kg	< 100			100	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	123			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	130			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S23-Ap0044215	CP	%	2.5	2.6	3.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference

Authorised by:

Adam Bateup	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Organic



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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1/8

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: (Y) / N Sample Temperature on Arrival: 13·2

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar – PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	HSC NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments	
	AHA101 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Relinquished By:
	AHA101 0.2-0.3	4/22/2024	Soil	GJ																		1								
	AHA102 0-0.01	4/22/2024	Soil	GJ								1																LEAD	Company:
	AHA102 0.3-0.35	4/22/2024	Soil	GJ																		1							Time: Date:
	AHA103 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Received By:
	AHA103 0.35-0.4	4/22/2024	Soil	GJ								1																LEAD	
	AHA104 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Company:
	AHA104 0.35-0.4	4/22/2024	Soil	GJ																		1							Time: Date:
	AHA105 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Relinquished By:
	AHA105 0.2-0.25	4/22/2024	Soil	GJ								1																LEAD	
	AHA106 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Company:
	AHA106 0.3-0.35	4/22/2024	Soil	GJ																		1							Time: Date:
	AHA107 0-0.1	4/22/2024	Soil	GJ								1																LEAD	Received By:
	DUP1	4/22/2024	Soil	GJ								1																LEAD	
	TRIP1	4/22/2024	Soil	GJ								1																SEND TO SGS FOR ANALYSIS	Company:
				Total								11										4							Time: Date:

JRandall 29/4
10:54

1091634

7/8

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments	
	AHA107 0.35-0.4	4/22/2024	Soil	GJ																		1								
	AHA108 0.02-0.1	4/22/2024	Soil	GJ								1																		LEAD
	AHA108 0.35-0.4	4/22/2024	Soil	GJ																		1								
	AHA109 0-0.1	4/22/2024	Soil	GJ								1																		LEAD
	AHA109 0.35-0.4	4/22/2024	Soil	GJ																		1								
	AHA110 0-0.1	4/22/2024	Soil	GJ								1																		LEAD
	AHA110 0.25-0.3	4/22/2024	Soil	GJ																		1								
	AHA111 0-0.1	4/24/2024	Soil	GJ								1																		LEAD
	DUP4	4/24/2024	Soil	GJ								1																		LEAD
	TRIP4	4/24/2024	Soil	GJ								1																		PLEASE SEND TO SGS FOR ANALYSIS
	AHA111 0.4-0.5	4/24/2024	Soil	GJ																		1								
	AHA112 0-0.1	4/24/2024	Soil	GJ								1																		LEAD
	AHA112 0.4-0.5	4/24/2024	Soil	GJ																		1								
	AHA113 0-0.1	4/24/2024	Soil	GJ								1																		LEAD
	AHA113 0.1-0.2	4/24/2024	Soil	GJ								1																		LEAD
				Total								9										6								

3/e

Chain of Custody

Stantec

From: Stantec St Leonards
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St Leonards NSW 2065
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Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com

callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP1 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1		1						B7A B15	STD 8 METALS
	TP1 0.3-0.4	4/23/2024	Soil	GJ, B & PJ																		1						
	TP1 0.6-0.7	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP2 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP2 0.2-0.3	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP2 0.5-0.6	4/23/2024	Soil	GJ, B & PJ																		1						
	TP3 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP3 0.4-0.5	4/23/2024	Soil	GJ, B & PJ																		1						
	TP3 0.7-0.8	4/23/2024	Soil	GJ, B & PJ																		1						
	TP4 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP4 0.4-0.5	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP4 1-1.1	4/23/2024	Soil	GJ, B & PJ																		1						
	TP5 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP5 0.4-0.5	4/23/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	TP5 0.9-1	4/23/2024	Soil	GJ, B & PJ																		1						
				Total	9		9	9	5	5	5			9		5			6	4	1	6							

4B/E

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
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Phone: (02) 8484 7000
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Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	PSD (NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP5 1.4-1.5	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP5 1.8-1.9	4/23/2024	Soil	GJ, B & PJ																		1						
	TP5 2.2-2.3	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP6 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1				1	1						B7A B15	STD 8 METALS
	TP6 0.5-0.6	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP6 1-1.1	4/23/2024	Soil	GJ, B & PJ																		1						
	TP7 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1				1	1						B7A B15	STD 8 METALS
	TP7 0.4-0.5	4/23/2024	Soil	GJ, B & PJ																		1						
	TP7 0.9-1.0	4/23/2024	Soil	GJ, B & PJ																		1						
	TP8 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1				1	1						B7A B15	STD 8 METALS
	TP8 0.4-0.5	4/23/2024	Soil	GJ, B & PJ																		1						
	TP8 0.9-1	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP9 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1				1	1						B7A B15	STD 8 METALS
	TP9 0.4-0.5	4/23/2024	Soil	GJ, B & PJ																		1						
	TP9 0.7-0.8	4/23/2024	Soil	GJ, B & PJ																		1						
				Total	8		8	8	4	4	4			8		4				4	4		7						

S4/E

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
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Email: ContamNSW@cardno.com.au
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To: Eurofins Sydney
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179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com

callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes – Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	ASC NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP10 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP10 0.4-0.5	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP10 0.7-0.8	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP11 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1								B7A B15	STD 8 METALS
	TP11 0.4-0.5	4/23/2024	Soil	GJ, B & PJ																		1						
	TP11 0.7-0.8	4/23/2024	Soil	GJ, B & PJ																		1						
	TP12 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP12 0.5-0.6	4/23/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP12 0.65-0.75	4/23/2024	Soil	GJ, B & PJ																		1						
	TP13 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1								B7A B15	STD 8 METALS
	TP13 0.5-0.6	4/23/2024	Soil	GJ, B & PJ	1		1	1						1							1						B7	STD 8 METALS
	TP13 0.9-1.0	4/23/2024	Soil	GJ, B & PJ																		1						
	TP14 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP14 0.5-0.6	4/23/2024	Soil	GJ, B & PJ																		1						
	TP14 1-1.1	4/23/2024	Soil	GJ, B & PJ																		1						
				Total	9		9	9	5	5	5			9		5			5	3	1	6						

S/C

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar – PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	ASC NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP15 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP15 0.6-0.7	4/23/2024	Soil	GJ, B & PJ																		1						
	TP15 1.1-1.2	4/23/2024	Soil	GJ, B & PJ																		1						
	TP16 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP16 0.5-0.6	4/23/2024	Soil	GJ, B & PJ										1								1						STD 8 METALS
	TP16 0.9-1.0	4/23/2024	Soil	GJ, B & PJ																		1						
	TP17 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP17 0.5-0.6	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP17 1-1.1	4/24/2024	Soil	GJ, B & PJ	1		1	1																			B4	
	TP18 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP18 0.4-0.5	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP18 0.7-0.8	4/24/2024	Soil	GJ, B & PJ																		1						
	TP19 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	DUP2	4/24/2024	Soil	GJ & PJ	1		1	1	1	1	1			1		1				1							B7A B15	STD 8 METALS
	TRIP2	4/24/2024	Soil	GJ & PJ	1		1	1	1	1	1			1		1				1							B7A B15	PLEASE SEND TO SGS FOR ANALYSIS
				Total	10		10	10	7	7	7			10		7			5	7		5						

76/E

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	NEPM Screen (pH, CEC, iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP19 0.3-0.4	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	TP19 0.4-0.5	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	TP19 0.8-0.9	4/24/2024	Soil	GJ, B & PJ															1			1						
	TP19 1.2-1.3	4/24/2024	Soil	GJ, B & PJ																		1						
	TP20 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP20 0.4-0.5	4/24/2024	Soil	GJ, B & PJ															1			1						
	TP20 0.7-0.8	4/24/2024	Soil	GJ, B & PJ																		1						
	TP21 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP21 0.5-0.6	4/24/2024	Soil	GJ, B & PJ																		1						
	TP21 1-1.1	4/24/2024	Soil	GJ, B & PJ																		1						
	TP/HA22 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	DUP3	4/24/2024	Soil	GJ & PJ	1		1	1						1													B7	STD 8 METALS
	TRIP3	4/24/2024	Soil	GJ & PJ	1		1	1						1													B7	PLEASE SEND TO SGS FOR ANALYSIS
	TP/HA22 0.2-0.3	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	RIN22/4/24	4/22/2024	Water	2 X PB, 2 X V & 1 X GJ								1							1									LEAD
				Total	8		8	8	2	2	2	1		8		2			8	2		6						

8/8

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
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Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	RIN23/4/24	4/23/2024	Water	2 X PB, 2 X V & 1 X GJ	1		1	1	1	1	1			1		1				1							B7A B15	STD 8 METALS
	RIN24/4/24	2/24/2024	Water	PB	1		1	1	1	1	1			1		1				1							B7A B15	STD 8 METALS
	TB/TS	4/22/2024	Water	2 X GV	1		1																				B1	
	TB/TS	4/23/2024	Water	2 X GV	1		1																				B1	
	TB/TS	4/24/2024	Water	2 X GV	1		1																				B1	
				Total	5		5	2	2	2	2			2		2				2								

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Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Stantec Australia Pty Ltd (NSW/ACT)
Contact name:	Callum Laker
Project name:	Gilleston Heights
Project ID:	304100928
Turnaround time:	5 Day
Date/Time received	Apr 29, 2024 10:54 AM
Eurofins reference	1091634

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

TRIP 1, 2, 3 and 4 sent to SGS. Extra water samples labelled DUP1 and SW1 logged on hold. Extra sample labelled Trip 1 sent to SGS with other TRIP samples. Extra samples AHA13 0.15-0.2, SED1, TP10 0.5-0.6 and TP4 0.8-0.9, TP16 0.4-0.5 (pfas tub only) logged on hold. No bags provided for TP1 0-0.1 (0.3-0.4 and 0.6-0.7) cannot perform ASB Nepm. Sample AHA112 0.4-0.5 not provided. No Jar or Pfas tub provided for sample TP16 0.5-0.6, M8 cancelled. No pfas tub provided for DUP 2, cannot analyse ofr PFAS

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Callum Laker - callum.laker@stantec.com.

Note: A copy of these results will also be delivered to the general Stantec Australia Pty Ltd (NSW/ACT) email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Site# 2370

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+61 8 6253 4444
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Site# 2554

Eurofins Environment Testing NZ Ltd
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Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
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Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X						
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X						
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
1	AHA101 0-0.1	Apr 22, 2024		Soil	N24-Ap0071403					X			X						
2	AHA102 0-0.01	Apr 22, 2024		Soil	N24-Ap0071404					X			X						
3	AHA103 0-0.1	Apr 22, 2024		Soil	N24-Ap0071405					X			X						
4	AHA103 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071406					X			X						
5	AHA104 0-0.1	Apr 22, 2024		Soil	N24-Ap0071407					X			X						
6	AHA105 0-0.1	Apr 22, 2024		Soil	N24-Ap0071408					X			X						
7	AHA105 0.2-0.25	Apr 22, 2024		Soil	N24-Ap0071409					X			X						
8	AHA106 0-0.1	Apr 22, 2024		Soil	N24-Ap0071410					X			X						
9	AHA107 0-0.1	Apr 22, 2024		Soil	N24-Ap0071411					X			X						

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email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Site# 2370

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NATA# 2561
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
10	DUP1	Apr 22, 2024		Soil	N24-Ap0071412					X			X							
11	AHA108 0.02-0.1	Apr 22, 2024		Soil	N24-Ap0071413					X			X							
12	AHA109 0-0.1	Apr 22, 2024		Soil	N24-Ap0071414					X			X							
13	AHA110 0-0.1	Apr 22, 2024		Soil	N24-Ap0071415					X			X							
14	AHA111 0-0.1	Apr 22, 2024		Soil	N24-Ap0071416					X			X							
15	DUP4	Apr 22, 2024		Soil	N24-Ap0071417					X			X							
16	AHA112 0-0.1	Apr 22, 2024		Soil	N24-Ap0071418					X			X							
17	AHA113 0-0.1	Apr 22, 2024		Soil	N24-Ap0071419					X			X							
18	AHA113 0.1-0.2	Apr 22, 2024		Soil	N24-Ap0071420					X			X							
19	TP1 0-0.1	Apr 23, 2024		Soil	N24-Ap0071421						X	X	X	X			X			
20	TP1 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071422								X		X					
21	TP2 0-0.1	Apr 23, 2024		Soil	N24-Ap0071423		X					X	X				X		X	

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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Address: Level 9, The Forum, 203 Pacific Highway
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NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
22	TP2 0.2-0.3	Apr 23, 2024		Soil	N24-Ap0071424								X		X					
23	TP3 0-0.1	Apr 23, 2024		Soil	N24-Ap0071425		X					X	X				X		X	
24	TP4 0-0.1	Apr 23, 2024		Soil	N24-Ap0071426		X					X	X				X		X	
25	TP4 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071427								X		X					
26	TP5 0-0.1	Apr 23, 2024		Soil	N24-Ap0071428		X					X	X				X		X	
27	TP5 0.9-1	Apr 23, 2024		Soil	N24-Ap0071429				X											
28	TP5 1.4-1.5	Apr 23, 2024		Soil	N24-Ap0071430								X		X					
29	TP5 2.2-2.3	Apr 23, 2024		Soil	N24-Ap0071431								X		X					
30	TP6 0-0.1	Apr 23, 2024		Soil	N24-Ap0071432		X					X	X				X		X	
31	TP6 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071433								X		X					
32	TP7 0-0.1	Apr 23, 2024		Soil	N24-Ap0071434		X					X	X				X		X	
33	TP8 0-0.1	Apr 23, 2024		Soil	N24-Ap0071435		X					X	X				X		X	
34	TP8 0.9-1	Apr 23, 2024		Soil	N24-Ap0071436								X		X					
35	TP10 0-0.1	Apr 23, 2024		Soil	N24-Ap0071437		X					X	X				X		X	

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
36	TP10 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071438								X		X					
37	TP10 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071439								X		X					
38	TP11 0-0.1	Apr 23, 2024		Soil	N24-Ap0071440		X					X	X				X			
39	TP12 0-0.1	Apr 23, 2024		Soil	N24-Ap0071441		X					X	X				X		X	
40	TP12 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071442								X		X					
41	TP13 0-0.1	Apr 23, 2024		Soil	N24-Ap0071443		X					X	X				X			
42	TP13 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071444						X		X	X	X					
43	TP14 0-0.1	Apr 23, 2024		Soil	N24-Ap0071445		X					X	X				X		X	
44	TP15 0-0.1	Apr 23, 2024		Soil	N24-Ap0071446		X					X	X				X		X	
45	TP16 0-0.1	Apr 23, 2024		Soil	N24-Ap0071447		X					X	X				X		X	
46	TP16 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071448			X												
47	TP17 0-0.1	Apr 24, 2024		Soil	N24-Ap0071449		X					X	X				X		X	
48	TP17 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071450								X		X					
49	TP17 1-1.1	Apr 24, 2024		Soil	N24-Ap0071451								X			X				

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
50	TP18 0-0.1	Apr 24, 2024		Soil	N24-Ap0071452		X					X	X				X		X	
51	TP18 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071453								X		X					
52	TP19 0-0.1	Apr 24, 2024		Soil	N24-Ap0071454		X					X	X				X		X	
53	DUP2	Apr 24, 2024		Soil	N24-Ap0071455							X	X				X			
54	TP19 0.3-0.4	Apr 24, 2024		Soil	N24-Ap0071456	X							X		X					
55	TP19 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071457		X						X		X					
56	TP19 0.8-0.9	Apr 24, 2024		Soil	N24-Ap0071458		X													
57	TP20 0-0.1	Apr 24, 2024		Soil	N24-Ap0071459		X					X	X				X		X	
58	TP20 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071460		X													
59	TP21 0-0.1	Apr 24, 2024		Soil	N24-Ap0071461		X					X	X				X		X	
60	TP/HA22 0-0.1	Apr 24, 2024		Soil	N24-Ap0071462		X						X		X					
61	DUP3	Apr 24, 2024		Soil	N24-Ap0071463								X		X					
62	TP/HA22 0.2-0.3	Apr 24, 2024		Soil	N24-Ap0071464								X		X					

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
63	RIN22/4/24	Apr 22, 2024		Water	N24-Ap0071465					X										
64	RIN23/4/24	Apr 23, 2024		Water	N24-Ap0071466							X					X		X	
65	RIN24/4/24	Apr 24, 2024		Water	N24-Ap0071467							X					X		X	
66	AHA101 0.2-0.3	Apr 22, 2024		Soil	N24-Ap0071468				X											
67	AHA102 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071469				X											
68	AHA104 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071470				X											
69	AHA106 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071471				X											
70	AHA107 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071472				X											
71	AHA108 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071473				X											
72	AHA109 0.35-	Apr 22, 2024		Soil	N24-Ap0071474				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
72	AHA109 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071474															
73	AHA110 0.25-0.3	Apr 22, 2024		Soil	N24-Ap0071475				X											
74	AHA111 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071476				X											
75	AHA112 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071477			X												
76	TP1 0.3-0.4	Apr 23, 2024		Soil	N24-Ap0071478				X											
77	TP2 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071479				X											
78	TP3 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071480				X											
79	TP3 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071481				X											
80	TP4 1-1.1	Apr 23, 2024		Soil	N24-Ap0071482				X											
81	TP5 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071483		X						X		X					
82	TP5 1.8-1.9	Apr 23, 2024		Soil	N24-Ap0071484				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
83	TP6 1-1.1	Apr 23, 2024		Soil	N24-Ap0071485				X											
84	TP7 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071486				X											
85	TP7 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071487				X											
86	TP8 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071488				X											
87	TP9 0-0.1	Apr 23, 2024		Soil	N24-Ap0071489		X					X	X				X		X	
88	TP9 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071490				X											
89	TP9 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071491				X											
90	TP11 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071492				X											
91	TP11 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071493				X											
92	TP12 0.65-0.75	Apr 23, 2024		Soil	N24-Ap0071494				X											
93	TP13 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071495				X											
94	TP14 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071496				X											
95	TP14 1-1.1	Apr 23, 2024		Soil	N24-Ap0071497				X											

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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
96	TP15 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071498				X											
97	TP15 1.1-1.2	Apr 23, 2024		Soil	N24-Ap0071499				X											
98	TP16 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071500				X											
99	TP18 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071501				X											
100	TP19 1.2-1.3	Apr 24, 2024		Soil	N24-Ap0071502				X											
101	TP20 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071503				X											
102	TP21 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071504				X											
103	TP21 1-1.1	Apr 24, 2024		Soil	N24-Ap0071505				X											
104	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071506															X
105	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071508													X		
106	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071509															X
107	TB	Apr 22, 2024		Trip Blank	N24-Ap0071511													X		

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Eurofins Analytical Services Manager : Ursula Long

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Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
				(solid)																
108	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071512															X
109	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071514													X		
110	DUP 1	Apr 22, 2024		Water	N24-Ap0071908				X											
111	SW1	Apr 22, 2024		Water	N24-Ap0071909				X											
112	AHA13 0.15-0.2	Apr 22, 2024		Soil	N24-Ap0071953				X											
113	SED1	Apr 22, 2024		Soil	N24-Ap0071954				X											
114	TP10 0.5-0.6	Apr 22, 2024		Soil	N24-Ap0071955				X											
115	TP4 0.8-0.9	Apr 22, 2024		Soil	N24-Ap0071956				X											
116	TP16 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071976				X											
Test Counts						1	25	2	43	21	2	24	60	2	19	1	24	3	20	3

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Stantec Australia Pty Ltd
Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Attention:	Callum Laker
Report	1091634-AID
Project Name	Gilleston Heights
Project ID	304100928
Received Date	Apr 29, 2024
Date Reported	May 15, 2024

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name Gilleston Heights
Project ID 304100928
Date Sampled Apr 23, 2024 to Apr 24, 2024
Report 1091634-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP2 0-0.1	24-Ap0071423	Apr 23, 2024	Approximate Sample 472g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP3 0-0.1	24-Ap0071425	Apr 23, 2024	Approximate Sample 361g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP4 0-0.1	24-Ap0071426	Apr 23, 2024	Approximate Sample 379g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP5 0-0.1	24-Ap0071428	Apr 23, 2024	Approximate Sample 318g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP6 0-0.1	24-Ap0071432	Apr 23, 2024	Approximate Sample 371g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP7 0-0.1	24-Ap0071434	Apr 23, 2024	Approximate Sample 257g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP8 0-0.1	24-Ap0071435	Apr 23, 2024	Approximate Sample 336g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10 0-0.1	24-Ap0071437	Apr 23, 2024	Approximate Sample 289g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP11 0-0.1	24-Ap0071440	Apr 23, 2024	Approximate Sample 339g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP12 0-0.1	24-Ap0071441	Apr 23, 2024	Approximate Sample 369g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP13 0-0.1	24-Ap0071443	Apr 23, 2024	Approximate Sample 414g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP14 0-0.1	24-Ap0071445	Apr 23, 2024	Approximate Sample 345g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP15 0-0.1	24-Ap0071446	Apr 23, 2024	Approximate Sample 253g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP16 0-0.1	24-Ap0071447	Apr 23, 2024	Approximate Sample 341g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP17 0-0.1	24-Ap0071449	Apr 24, 2024	Approximate Sample 295g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP18 0-0.1	24-Ap0071452	Apr 24, 2024	Approximate Sample 402g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP19 0-0.1	24-Ap0071454	Apr 24, 2024	Approximate Sample 459g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP19 0.3-0.4	24-Ap0071456	Apr 24, 2024	Approximate Sample 179g Sample consisted of: Brown coarse grained sandy clayey soil, rocks and debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP19 0.4-0.5	24-Ap0071457	Apr 24, 2024	Approximate Sample 297g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP19 0.8-0.9	24-Ap0071458	Apr 24, 2024	Approximate Sample 385g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP20 0-0.1	24-Ap0071459	Apr 24, 2024	Approximate Sample 495g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP20 0.4-0.5	24-Ap0071460	Apr 24, 2024	Approximate Sample 350g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP21 0-0.1	24-Ap0071461	Apr 24, 2024	Approximate Sample 476g Sample consisted of: Brown coarse grained sandy clayey soil, coal and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP/HA22 0-0.1	24-Ap0071462	Apr 24, 2024	Approximate Sample 410g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP5 0.4-0.5	24-Ap0071483	Apr 23, 2024	Approximate Sample 440g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP9 0-0.1	24-Ap0071489	Apr 23, 2024	Approximate Sample 372g Sample consisted of: Brown coarse grained sandy clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	May 08, 2024	Indefinite
Asbestos - LTM-ASB-8020	Sydney	May 08, 2024	Indefinite

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Melbourne Laboratory - NATA # 1261 Site # 1254									X						
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X						
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
1	AHA101 0-0.1	Apr 22, 2024		Soil	N24-Ap0071403					X			X						
2	AHA102 0-0.01	Apr 22, 2024		Soil	N24-Ap0071404					X			X						
3	AHA103 0-0.1	Apr 22, 2024		Soil	N24-Ap0071405					X			X						
4	AHA103 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071406					X			X						
5	AHA104 0-0.1	Apr 22, 2024		Soil	N24-Ap0071407					X			X						
6	AHA105 0-0.1	Apr 22, 2024		Soil	N24-Ap0071408					X			X						
7	AHA105 0.2-0.25	Apr 22, 2024		Soil	N24-Ap0071409					X			X						
8	AHA106 0-0.1	Apr 22, 2024		Soil	N24-Ap0071410					X			X						
9	AHA107 0-0.1	Apr 22, 2024		Soil	N24-Ap0071411					X			X						

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
10	DUP1	Apr 22, 2024		Soil	N24-Ap0071412					X			X							
11	AHA108 0.02-0.1	Apr 22, 2024		Soil	N24-Ap0071413					X			X							
12	AHA109 0-0.1	Apr 22, 2024		Soil	N24-Ap0071414					X			X							
13	AHA110 0-0.1	Apr 22, 2024		Soil	N24-Ap0071415					X			X							
14	AHA111 0-0.1	Apr 22, 2024		Soil	N24-Ap0071416					X			X							
15	DUP4	Apr 22, 2024		Soil	N24-Ap0071417					X			X							
16	AHA112 0-0.1	Apr 22, 2024		Soil	N24-Ap0071418					X			X							
17	AHA113 0-0.1	Apr 22, 2024		Soil	N24-Ap0071419					X			X							
18	AHA113 0.1-0.2	Apr 22, 2024		Soil	N24-Ap0071420					X			X							
19	TP1 0-0.1	Apr 23, 2024		Soil	N24-Ap0071421						X	X	X	X			X			
20	TP1 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071422								X		X					
21	TP2 0-0.1	Apr 23, 2024		Soil	N24-Ap0071423		X					X	X				X		X	

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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St Leonards
NSW 2065

Project Name: Gilleston Heights
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Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

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Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
22	TP2 0.2-0.3	Apr 23, 2024		Soil	N24-Ap0071424								X		X					
23	TP3 0-0.1	Apr 23, 2024		Soil	N24-Ap0071425		X					X	X				X		X	
24	TP4 0-0.1	Apr 23, 2024		Soil	N24-Ap0071426		X					X	X				X		X	
25	TP4 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071427								X		X					
26	TP5 0-0.1	Apr 23, 2024		Soil	N24-Ap0071428		X					X	X				X		X	
27	TP5 0.9-1	Apr 23, 2024		Soil	N24-Ap0071429				X											
28	TP5 1.4-1.5	Apr 23, 2024		Soil	N24-Ap0071430								X		X					
29	TP5 2.2-2.3	Apr 23, 2024		Soil	N24-Ap0071431								X		X					
30	TP6 0-0.1	Apr 23, 2024		Soil	N24-Ap0071432		X					X	X				X		X	
31	TP6 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071433								X		X					
32	TP7 0-0.1	Apr 23, 2024		Soil	N24-Ap0071434		X					X	X				X		X	
33	TP8 0-0.1	Apr 23, 2024		Soil	N24-Ap0071435		X					X	X				X		X	
34	TP8 0.9-1	Apr 23, 2024		Soil	N24-Ap0071436								X		X					
35	TP10 0-0.1	Apr 23, 2024		Soil	N24-Ap0071437		X					X	X				X		X	

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
36	TP10 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071438								X		X					
37	TP10 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071439								X		X					
38	TP11 0-0.1	Apr 23, 2024		Soil	N24-Ap0071440		X					X	X				X			
39	TP12 0-0.1	Apr 23, 2024		Soil	N24-Ap0071441		X					X	X				X		X	
40	TP12 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071442								X		X					
41	TP13 0-0.1	Apr 23, 2024		Soil	N24-Ap0071443		X					X	X				X			
42	TP13 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071444						X		X	X	X					
43	TP14 0-0.1	Apr 23, 2024		Soil	N24-Ap0071445		X					X	X				X		X	
44	TP15 0-0.1	Apr 23, 2024		Soil	N24-Ap0071446		X					X	X				X		X	
45	TP16 0-0.1	Apr 23, 2024		Soil	N24-Ap0071447		X					X	X				X		X	
46	TP16 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071448			X												
47	TP17 0-0.1	Apr 24, 2024		Soil	N24-Ap0071449		X					X	X				X		X	
48	TP17 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071450								X		X					
49	TP17 1-1.1	Apr 24, 2024		Soil	N24-Ap0071451								X			X				

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
50	TP18 0-0.1	Apr 24, 2024		Soil	N24-Ap0071452		X					X	X				X		X	
51	TP18 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071453								X		X					
52	TP19 0-0.1	Apr 24, 2024		Soil	N24-Ap0071454		X					X	X				X		X	
53	DUP2	Apr 24, 2024		Soil	N24-Ap0071455							X	X				X			
54	TP19 0.3-0.4	Apr 24, 2024		Soil	N24-Ap0071456	X							X		X					
55	TP19 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071457		X						X		X					
56	TP19 0.8-0.9	Apr 24, 2024		Soil	N24-Ap0071458		X													
57	TP20 0-0.1	Apr 24, 2024		Soil	N24-Ap0071459		X					X	X				X		X	
58	TP20 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071460		X													
59	TP21 0-0.1	Apr 24, 2024		Soil	N24-Ap0071461		X					X	X				X		X	
60	TP/HA22 0-0.1	Apr 24, 2024		Soil	N24-Ap0071462		X						X		X					
61	DUP3	Apr 24, 2024		Soil	N24-Ap0071463								X		X					
62	TP/HA22 0.2-0.3	Apr 24, 2024		Soil	N24-Ap0071464								X		X					

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
63	RIN22/4/24	Apr 22, 2024		Water	N24-Ap0071465					X										
64	RIN23/4/24	Apr 23, 2024		Water	N24-Ap0071466							X					X		X	
65	RIN24/4/24	Apr 24, 2024		Water	N24-Ap0071467							X					X		X	
66	AHA101 0.2-0.3	Apr 22, 2024		Soil	N24-Ap0071468				X											
67	AHA102 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071469				X											
68	AHA104 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071470				X											
69	AHA106 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071471				X											
70	AHA107 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071472				X											
71	AHA108 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071473				X											
72	AHA109 0.35-	Apr 22, 2024		Soil	N24-Ap0071474				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
72	AHA109 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071474															
73	AHA110 0.25-0.3	Apr 22, 2024		Soil	N24-Ap0071475				X											
74	AHA111 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071476				X											
75	AHA112 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071477			X												
76	TP1 0.3-0.4	Apr 23, 2024		Soil	N24-Ap0071478				X											
77	TP2 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071479				X											
78	TP3 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071480				X											
79	TP3 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071481				X											
80	TP4 1-1.1	Apr 23, 2024		Soil	N24-Ap0071482				X											
81	TP5 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071483		X						X		X					
82	TP5 1.8-1.9	Apr 23, 2024		Soil	N24-Ap0071484				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
83	TP6 1-1.1	Apr 23, 2024		Soil	N24-Ap0071485				X											
84	TP7 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071486				X											
85	TP7 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071487				X											
86	TP8 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071488				X											
87	TP9 0-0.1	Apr 23, 2024		Soil	N24-Ap0071489		X					X	X				X		X	
88	TP9 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071490				X											
89	TP9 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071491				X											
90	TP11 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071492				X											
91	TP11 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071493				X											
92	TP12 0.65-0.75	Apr 23, 2024		Soil	N24-Ap0071494				X											
93	TP13 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071495				X											
94	TP14 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071496				X											
95	TP14 1-1.1	Apr 23, 2024		Soil	N24-Ap0071497				X											

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
96	TP15 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071498				X											
97	TP15 1.1-1.2	Apr 23, 2024		Soil	N24-Ap0071499				X											
98	TP16 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071500				X											
99	TP18 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071501				X											
100	TP19 1.2-1.3	Apr 24, 2024		Soil	N24-Ap0071502				X											
101	TP20 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071503				X											
102	TP21 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071504				X											
103	TP21 1-1.1	Apr 24, 2024		Soil	N24-Ap0071505				X											
104	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071506															X
105	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071508													X		
106	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071509															X
107	TB	Apr 22, 2024		Trip Blank	N24-Ap0071511													X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
				(solid)																
108	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071512															X
109	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071514													X		
110	DUP 1	Apr 22, 2024		Water	N24-Ap0071908				X											
111	SW1	Apr 22, 2024		Water	N24-Ap0071909				X											
112	AHA13 0.15-0.2	Apr 22, 2024		Soil	N24-Ap0071953				X											
113	SED1	Apr 22, 2024		Soil	N24-Ap0071954				X											
114	TP10 0.5-0.6	Apr 22, 2024		Soil	N24-Ap0071955				X											
115	TP4 0.8-0.9	Apr 22, 2024		Soil	N24-Ap0071956				X											
116	TP16 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071976				X											
Test Counts						1	25	2	43	21	2	24	60	2	19	1	24	3	20	3

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix may be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**). This estimate is not NATA-accredited.
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g., by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total %w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w**).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average %w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

24-Ap0071423 to 24-Ap0071454 and 24-Ap0071457 to 24-Ap0071489 : Samples received were less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos

Authorised by:

Bennel Jiri	Senior Analyst-Asbestos



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Stantec Australia Pty Ltd
Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Callum Laker**

Report **1091634-S**
Project name Gilleston Heights
Project ID 304100928
Received Date Apr 29, 2024

Client Sample ID			AHA101 0-0.1	AHA102 0-0.01	AHA103 0-0.1	AHA103 0.35-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071403	N24-Ap0071404	N24-Ap0071405	N24-Ap0071406
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	< 5	70	45	780
Sample Properties						
% Moisture	1	%	6.3	15	12	17

Client Sample ID			AHA104 0-0.1	AHA105 0-0.1	AHA105 0.2-0.25	AHA106 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071407	N24-Ap0071408	N24-Ap0071409	N24-Ap0071410
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	110	16	14	27
Sample Properties						
% Moisture	1	%	17	12	14	33

Client Sample ID			AHA107 0-0.1	DUP1	AHA108 0.02-0.1	AHA109 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071411	N24-Ap0071412	N24-Ap0071413	N24-Ap0071414
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	180	150	24	68
Sample Properties						
% Moisture	1	%	19	21	40	38

Client Sample ID			AHA110 0-0.1	AHA111 0-0.1	DUP4	AHA112 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071415	N24-Ap0071416	N24-Ap0071417	N24-Ap0071418
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	39	54	72	47
Sample Properties						
% Moisture	1	%	15	27	21	24

Client Sample ID			AHA113 0-0.1	AHA113 0.1-0.2	TP1 0-0.1	TP1 0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071419	N24-Ap0071420	N24-Ap0071421	N24-Ap0071422
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	-	-	4.7	7.2
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	7.1	12
Copper	5	mg/kg	-	-	< 5	< 5
Iron	20	mg/kg	-	-	7900	-
Lead	5	mg/kg	23	65	12	7.1
Mercury	0.1	mg/kg	-	-	< 0.1	< 0.1
Nickel	5	mg/kg	-	-	< 5	< 5
Zinc	5	mg/kg	-	-	24	< 5
Sample Properties						
% Moisture	1	%	24	17	14	18
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	58	88
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			AHA113 0-0.1	AHA113 0.1-0.2	TP1 0-0.1	TP1 0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071419	N24-Ap0071420	N24-Ap0071421	N24-Ap0071422
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	119	89
p-Terphenyl-d14 (surr.)	1	%	-	-	131	95
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-HCH	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-HCH	0.05	mg/kg	-	-	< 0.05	-
d-HCH	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	0.5	mg/kg	-	-	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	144	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	-

Client Sample ID			AHA113 0-0.1	AHA113 0.1-0.2	TP1 0-0.1	TP1 0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071419	N24-Ap0071420	N24-Ap0071421	N24-Ap0071422
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Bolstar	0.2	mg/kg	-	-	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	-
Coumaphos	2	mg/kg	-	-	< 2	-
Demeton-S	0.2	mg/kg	-	-	< 0.2	-
Demeton-O	0.2	mg/kg	-	-	< 0.2	-
Diazinon	0.2	mg/kg	-	-	< 0.2	-
Dichlorvos	0.2	mg/kg	-	-	< 0.2	-
Dimethoate	0.2	mg/kg	-	-	< 0.2	-
Disulfoton	0.2	mg/kg	-	-	< 0.2	-
EPN	0.2	mg/kg	-	-	< 0.2	-
Ethion	0.2	mg/kg	-	-	< 0.2	-
Ethoprop	0.2	mg/kg	-	-	< 0.2	-
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	-
Fenitrothion	0.2	mg/kg	-	-	< 0.2	-
Fensulfothion	0.2	mg/kg	-	-	< 0.2	-
Fenthion	0.2	mg/kg	-	-	< 0.2	-
Malathion	0.2	mg/kg	-	-	< 0.2	-
Merphos	0.2	mg/kg	-	-	< 0.2	-
Methyl parathion	0.2	mg/kg	-	-	< 0.2	-
Mevinphos	0.2	mg/kg	-	-	< 0.2	-
Monocrotophos	2	mg/kg	-	-	< 2	-
Naled	0.2	mg/kg	-	-	< 0.2	-
Omethoate	2	mg/kg	-	-	< 2	-
Phorate	0.2	mg/kg	-	-	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Pyrazophos	0.2	mg/kg	-	-	< 0.2	-
Ronnel	0.2	mg/kg	-	-	< 0.2	-
Terbufos	0.2	mg/kg	-	-	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	-
Tokuthion	0.2	mg/kg	-	-	< 0.2	-
Trichloronate	0.2	mg/kg	-	-	< 0.2	-
Triphenylphosphate (surr.)	1	%	-	-	147	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	144	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	118	-

Client Sample ID			AHA113 0-0.1	AHA113 0.1-0.2	TP1 0-0.1	TP1 0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071419	N24-Ap0071420	N24-Ap0071421	N24-Ap0071422
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Nitrophenol	1	mg/kg	-	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
Total cresols*	0.5	mg/kg	-	-	< 0.5	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
Dinoseb	20	mg/kg	-	-	< 20	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	104	-
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	< 100
% Clay	2.5	%	-	-	< 2.5	-
Conductivity (1:5 aqueous extract at 25 °C as rec.)	10	uS/cm	-	-	23	-
pH (units)(1:5 soil:CaCl2 extract at 25 °C as rec.)	0.1	pH Units	-	-	4.9	-
Total Organic Carbon*	0.1	%	-	-	3.0	-
Heavy Metals						
Iron (%)	0.01	%	-	-	0.79	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.5	meq/100g	-	-	6.1	-

Client Sample ID			TP2 0-0.1	TP2 0.2-0.3	TP3 0-0.1	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071423	N24-Ap0071424	N24-Ap0071425	N24-Ap0071426
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.9	47	6.3	5.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.5	26	7.0	< 5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	8.1	13	9.3	8.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	7.4	< 5	14	19
Sample Properties						
% Moisture	1	%	8.4	6.1	16	16
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	0.2	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	83	104	52
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP2 0-0.1	TP2 0.2-0.3	TP3 0-0.1	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071423	N24-Ap0071424	N24-Ap0071425	N24-Ap0071426
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	97	85	93
p-Terphenyl-d14 (surr.)	1	%	100	113	85	99
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	113	-	103	96
Tetrachloro-m-xylene (surr.)	1	%	95	-	91	97
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	-	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2

Client Sample ID			TP2 0-0.1	TP2 0.2-0.3	TP3 0-0.1	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071423	N24-Ap0071424	N24-Ap0071425	N24-Ap0071426
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	-	< 2	< 2
Naled	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	-	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	-	106	108
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	113	-	103	96
Tetrachloro-m-xylene (surr.)	1	%	95	-	91	97
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5

Client Sample ID			TP2 0-0.1	TP2 0.2-0.3	TP3 0-0.1	TP4 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071423	N24-Ap0071424	N24-Ap0071425	N24-Ap0071426
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	< 5	-	< 5	< 5
Dinoseb	20	mg/kg	< 20	-	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	74	-	78	83
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	-	< 10	< 10
13C2-6:2 FTSA (surr.)	1	%	107	-	96	91
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	< 5	< 5
18O2-PFHxS (surr.)	1	%	107	-	107	94
13C8-PFOS (surr.)	1	%	110	-	111	108
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	< 5	< 5
13C8-PFOA (surr.)	1	%	97	-	90	98
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	< 5	< 5

Client Sample ID			TP4 0.4-0.5	TP5 0-0.1	TP5 1.4-1.5	TP5 2.2-2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071427	N24-Ap0071428	N24-Ap0071430	N24-Ap0071431
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.7	3.1	3.2	6.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	5.0	< 5	8.7
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	< 5	8.2	< 5	7.5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	21	< 5	< 5
Sample Properties						
% Moisture	1	%	12	18	5.0	12
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	63	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	63	< 50	< 50

Client Sample ID			TP4 0.4-0.5	TP5 0-0.1	TP5 1.4-1.5	TP5 2.2-2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071427	N24-Ap0071428	N24-Ap0071430	N24-Ap0071431
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	133	84	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	120	76	98	86
p-Terphenyl-d14 (surr.)	1	%	139	70	106	95
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-

Client Sample ID			TP4 0.4-0.5	TP5 0-0.1	TP5 1.4-1.5	TP5 2.2-2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071427	N24-Ap0071428	N24-Ap0071430	N24-Ap0071431
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	87	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	75	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	74	-	-

Client Sample ID			TP4 0.4-0.5	TP5 0-0.1	TP5 1.4-1.5	TP5 2.2-2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071427	N24-Ap0071428	N24-Ap0071430	N24-Ap0071431
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	87	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	75	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
Total cresols*	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	54	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	84	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	97	-	-
13C8-PFOS (surr.)	1	%	-	100	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	94	-	-

Client Sample ID			TP4 0.4-0.5	TP5 0-0.1	TP5 1.4-1.5	TP5 2.2-2.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071427	N24-Ap0071428	N24-Ap0071430	N24-Ap0071431
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP6 0-0.1	TP6 0.5-0.6	TP7 0-0.1	TP8 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071432	N24-Ap0071433	N24-Ap0071434	N24-Ap0071435
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.7	3.8	< 2	2.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	5.2
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	9.4	< 5	12	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	14	< 5	17	13
Sample Properties						
% Moisture	1	%	18	10.0	31	35
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	55	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	55	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	76	77	100	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	61	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP6 0-0.1	TP6 0.5-0.6	TP7 0-0.1	TP8 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071432	N24-Ap0071433	N24-Ap0071434	N24-Ap0071435
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	104	116	76	89
p-Terphenyl-d14 (surr.)	1	%	113	142	71	98
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	105	-	68	108
Tetrachloro-m-xylene (surr.)	1	%	108	-	76	94
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2

Client Sample ID			TP6 0-0.1	TP6 0.5-0.6	TP7 0-0.1	TP8 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071432	N24-Ap0071433	N24-Ap0071434	N24-Ap0071435
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	-	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	-	< 2	< 2
Naled	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	-	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	101	-	73	112
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	105	-	68	108
Tetrachloro-m-xylene (surr.)	1	%	108	-	76	94
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	< 1	< 1

Client Sample ID			TP6 0-0.1	TP6 0.5-0.6	TP7 0-0.1	TP8 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071432	N24-Ap0071433	N24-Ap0071434	N24-Ap0071435
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
Pentachlorophenol	1	mg/kg	< 1	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	-	< 5	< 5
Dinoseb	20	mg/kg	< 20	-	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	84	-	56	63
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	< 20	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	61	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	-	< 10	< 10
13C2-6:2 FTSA (surr.)	1	%	80	-	92	98
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	< 5	< 5
18O2-PFHxS (surr.)	1	%	96	-	93	94
13C8-PFOS (surr.)	1	%	105	-	103	93
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	< 5	< 5
13C8-PFOA (surr.)	1	%	90	-	96	99
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	< 5	< 5

Client Sample ID			TP8 0.9-1	TP10 0-0.1	TP10 0.4-0.5	TP10 0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071436	N24-Ap0071437	N24-Ap0071438	N24-Ap0071439
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	5.8	3.7	2.9	9.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.5	5.6	< 5	19
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	< 5	11	< 5	9.7

Client Sample ID			TP8 0.9-1	TP10 0-0.1	TP10 0.4-0.5	TP10 0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071436	N24-Ap0071437	N24-Ap0071438	N24-Ap0071439
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	16	< 5	6.4
Sample Properties						
% Moisture	1	%	16	16	8.8	19
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	78	90	70	75
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	115	89	95	103
p-Terphenyl-d14 (surr.)	1	%	125	100	114	105

Client Sample ID			TP8 0.9-1	TP10 0-0.1	TP10 0.4-0.5	TP10 0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071436	N24-Ap0071437	N24-Ap0071438	N24-Ap0071439
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	111	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	95	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Bolstar	0.2	mg/kg	-	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	-	-
Coumaphos	2	mg/kg	-	< 2	-	-
Demeton-S	0.2	mg/kg	-	< 0.2	-	-
Demeton-O	0.2	mg/kg	-	< 0.2	-	-
Diazinon	0.2	mg/kg	-	< 0.2	-	-
Dichlorvos	0.2	mg/kg	-	< 0.2	-	-
Dimethoate	0.2	mg/kg	-	< 0.2	-	-
Disulfoton	0.2	mg/kg	-	< 0.2	-	-
EPN	0.2	mg/kg	-	< 0.2	-	-
Ethion	0.2	mg/kg	-	< 0.2	-	-
Ethoprop	0.2	mg/kg	-	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	-	-
Fenitrothion	0.2	mg/kg	-	< 0.2	-	-
Fensulfothion	0.2	mg/kg	-	< 0.2	-	-
Fenthion	0.2	mg/kg	-	< 0.2	-	-
Malathion	0.2	mg/kg	-	< 0.2	-	-
Merphos	0.2	mg/kg	-	< 0.2	-	-

Client Sample ID			TP8 0.9-1	TP10 0-0.1	TP10 0.4-0.5	TP10 0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071436	N24-Ap0071437	N24-Ap0071438	N24-Ap0071439
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	-	< 0.2	-	-
Mevinphos	0.2	mg/kg	-	< 0.2	-	-
Monocrotophos	2	mg/kg	-	< 2	-	-
Naled	0.2	mg/kg	-	< 0.2	-	-
Omethoate	2	mg/kg	-	< 2	-	-
Phorate	0.2	mg/kg	-	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	-	-
Pyrazophos	0.2	mg/kg	-	< 0.2	-	-
Ronnel	0.2	mg/kg	-	< 0.2	-	-
Terbufos	0.2	mg/kg	-	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	-	-
Tokuthion	0.2	mg/kg	-	< 0.2	-	-
Trichloronate	0.2	mg/kg	-	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	-	116	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	-	-
Total PCB*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	111	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	95	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	-	-
Pentachlorophenol	1	mg/kg	-	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	-	-
2-Nitrophenol	1	mg/kg	-	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	-	-
Total cresols*	0.5	mg/kg	-	< 0.5	-	-
4-Nitrophenol	5	mg/kg	-	< 5	-	-
Dinoseb	20	mg/kg	-	< 20	-	-
Phenol	0.5	mg/kg	-	< 0.5	-	-
Phenol-d6 (surr.)	1	%	-	68	-	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	-	-

Client Sample ID			TP8 0.9-1	TP10 0-0.1	TP10 0.4-0.5	TP10 0.7-0.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071436	N24-Ap0071437	N24-Ap0071438	N24-Ap0071439
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	67	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	106	-	-
13C8-PFOS (surr.)	1	%	-	101	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	93	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP11 0-0.1	TP12 0-0.1	TP12 0.5-0.6	TP13 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071440	N24-Ap0071441	N24-Ap0071442	N24-Ap0071443
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.6	8.3	16	4.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.0	15	19	7.8
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	14	16	7.5	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	21	19	8.9	21
Sample Properties						
% Moisture	1	%	20	16	14	16
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	62	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	62	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	143	97	103	84

Client Sample ID			TP11 0-0.1	TP12 0-0.1	TP12 0.5-0.6	TP13 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071440	N24-Ap0071441	N24-Ap0071442	N24-Ap0071443
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	94	85	108
p-Terphenyl-d14 (surr.)	1	%	74	111	90	125
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5

Client Sample ID			TP11 0-0.1	TP12 0-0.1	TP12 0.5-0.6	TP13 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071440	N24-Ap0071441	N24-Ap0071442	N24-Ap0071443
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	58	112	-	136
Tetrachloro-m-xylene (surr.)	1	%	77	103	-	117
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	-	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Omethoate	2	mg/kg	< 2	< 2	-	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	75	120	-	132
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1

Client Sample ID			TP11 0-0.1	TP12 0-0.1	TP12 0.5-0.6	TP13 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071440	N24-Ap0071441	N24-Ap0071442	N24-Ap0071443
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	58	112	-	136
Tetrachloro-m-xylene (surr.)	1	%	77	103	-	117
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	-	< 5
Dinoseb	20	mg/kg	< 20	< 20	-	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenol-d6 (surr.)	1	%	52	70	-	83
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	66	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	92	-	-
13C8-PFOS (surr.)	1	%	-	102	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	95	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP13 0.5-0.6	TP14 0-0.1	TP15 0-0.1	TP16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071444	N24-Ap0071445	N24-Ap0071446	N24-Ap0071447
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.4	3.0	2.7	5.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.7	< 5	< 5	9.5
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Iron	20	mg/kg	13000	-	-	-
Lead	5	mg/kg	5.2	12	11	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	14	19	29
Sample Properties						
% Moisture	1	%	9.1	15	19	19
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	INT	83	96	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP13 0.5-0.6	TP14 0-0.1	TP15 0-0.1	TP16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071444	N24-Ap0071445	N24-Ap0071446	N24-Ap0071447
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	91	97	93	99
p-Terphenyl-d14 (surr.)	1	%	110	95	96	95
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	60	90	70
Tetrachloro-m-xylene (surr.)	1	%	-	100	95	97
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			TP13 0.5-0.6	TP14 0-0.1	TP15 0-0.1	TP16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071444	N24-Ap0071445	N24-Ap0071446	N24-Ap0071447
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	85	87	88
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	60	90	70
Tetrachloro-m-xylene (surr.)	1	%	-	100	95	97
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	-	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	< 1	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2-Nitrophenol	1	mg/kg	-	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4

Client Sample ID			TP13 0.5-0.6	TP14 0-0.1	TP15 0-0.1	TP16 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071444	N24-Ap0071445	N24-Ap0071446	N24-Ap0071447
Date Sampled			Apr 23, 2024	Apr 23, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Total cresols*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	-	< 5	< 5	< 5
Dinoseb	20	mg/kg	-	< 20	< 20	< 20
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	82	74	84
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	< 20	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
% Clay	2.5	%	< 2.5	-	-	-
Conductivity (1:5 aqueous extract at 25 °C as rec.)	10	uS/cm	20	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25 °C as rec.)	0.1	pH Units	4.5	-	-	-
Total Organic Carbon*	0.1	%	0.3	-	-	-
Heavy Metals						
Iron (%)	0.01	%	1.3	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.5	meq/100g	1.1	-	-	-
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	< 10	< 10
13C2-6:2 FTSA (surr.)	1	%	-	81	108	107
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	< 5	< 5
18O2-PFHxS (surr.)	1	%	-	94	97	99
13C8-PFOS (surr.)	1	%	-	105	98	101
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	< 5	< 5
13C8-PFOA (surr.)	1	%	-	104	106	96
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	< 5

Client Sample ID			[G01]TP17 0-0.1	TP17 0.5-0.6	TP17 1-1.1	TP18 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071449	N24-Ap0071450	N24-Ap0071451	N24-Ap0071452
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.2	17	-	5.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	13	37	-	11
Copper	5	mg/kg	6.5	< 5	-	< 5
Lead	5	mg/kg	29	23	-	86
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	< 5	< 5	-	< 5
Zinc	5	mg/kg	39	< 5	-	30

Client Sample ID			[G01]TP17 0-0.1	TP17 0.5-0.6	TP17 1-1.1	TP18 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071449	N24-Ap0071450	N24-Ap0071451	N24-Ap0071452
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	22	19	7.2	16
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	63	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	63	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	99	71	102	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	104	95	111
p-Terphenyl-d14 (surr.)	1	%	78	109	109	123
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 1	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.5	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.5	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.5	-	-	< 0.05

Client Sample ID			[G01]TP17 0-0.1	TP17 0.5-0.6	TP17 1-1.1	TP18 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071449	N24-Ap0071450	N24-Ap0071451	N24-Ap0071452
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
a-HCH	0.05	mg/kg	< 0.5	-	-	< 0.05
Aldrin	0.05	mg/kg	< 0.5	-	-	< 0.05
b-HCH	0.05	mg/kg	< 0.5	-	-	< 0.05
d-HCH	0.05	mg/kg	< 0.5	-	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.5	-	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.5	-	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.5	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.5	-	-	< 0.05
Endrin	0.05	mg/kg	< 0.5	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.5	-	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.5	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.5	-	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.5	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.5	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.5	-	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.5	-	-	< 0.05
Toxaphene	0.5	mg/kg	< 10	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.5	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.5	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 1	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	62	-	-	131
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	117
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.5	-	-	< 0.2
Bolstar	0.2	mg/kg	< 0.5	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.5	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.5	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.5	-	-	< 0.2
Coumaphos	2	mg/kg	< 5	-	-	< 2
Demeton-S	0.2	mg/kg	< 0.5	-	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.5	-	-	< 0.2
Diazinon	0.2	mg/kg	< 0.5	-	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.5	-	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.5	-	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.5	-	-	< 0.2
EPN	0.2	mg/kg	< 0.5	-	-	< 0.2
Ethion	0.2	mg/kg	< 0.5	-	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.5	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.5	-	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.5	-	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.5	-	-	< 0.2
Fenthion	0.2	mg/kg	< 0.5	-	-	< 0.2
Malathion	0.2	mg/kg	< 0.5	-	-	< 0.2
Merphos	0.2	mg/kg	< 0.5	-	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.5	-	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.5	-	-	< 0.2
Monocrotophos	2	mg/kg	< 5	-	-	< 2
Naled	0.2	mg/kg	< 0.5	-	-	< 0.2

Client Sample ID			G01 TP17 0-0.1	TP17 0.5-0.6	TP17 1-1.1	TP18 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071449	N24-Ap0071450	N24-Ap0071451	N24-Ap0071452
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Omethoate	2	mg/kg	< 5	-	-	< 2
Phorate	0.2	mg/kg	< 0.5	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.5	-	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.5	-	-	< 0.2
Ronnel	0.2	mg/kg	< 0.5	-	-	< 0.2
Terbufos	0.2	mg/kg	< 0.5	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.5	-	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.5	-	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.5	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	62	-	-	122
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	< 1	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	< 1	-	-	< 0.1
Total PCB*	0.1	mg/kg	< 1	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	62	-	-	131
Tetrachloro-m-xylene (surr.)	1	%	72	-	-	117
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	< 1
Pentachlorophenol	1	mg/kg	< 1	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Nitrophenol	1	mg/kg	< 1	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 1	-	-	< 0.4
Total cresols*	0.5	mg/kg	< 1	-	-	< 0.5
4-Nitrophenol	5	mg/kg	< 5	-	-	< 5
Dinoseb	20	mg/kg	< 20	-	-	< 20
Phenol	0.5	mg/kg	1.9	-	-	< 0.5
Phenol-d6 (surr.)	1	%	67	-	-	85
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	< 20

Client Sample ID			[G01]TP17 0-0.1	TP17 0.5-0.6	TP17 1-1.1	TP18 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071449	N24-Ap0071450	N24-Ap0071451	N24-Ap0071452
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	-	-	< 10
13C2-6:2 FTSA (surr.)	1	%	88	-	-	92
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	-	-	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	-	-	< 5
18O2-PFHxS (surr.)	1	%	103	-	-	90
13C8-PFOS (surr.)	1	%	105	-	-	92
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	-	-	< 5
13C8-PFOA (surr.)	1	%	95	-	-	80
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	-	-	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	-	-	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	-	-	< 5

Client Sample ID			TP18 0.4-0.5	TP19 0-0.1	DUP2	TP19 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071453	N24-Ap0071454	N24-Ap0071455	N24-Ap0071456
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	18	< 2	< 2	7.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	33	37	9.0
Copper	5	mg/kg	< 5	22	27	8.2
Lead	5	mg/kg	6.8	< 5	< 5	44
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	23	25	< 5
Zinc	5	mg/kg	< 5	67	56	110
Sample Properties						
% Moisture	1	%	9.9	6.2	6.1	17
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	99	48	109	105

Client Sample ID			TP18 0.4-0.5	TP19 0-0.1	DUP2	TP19 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071453	N24-Ap0071454	N24-Ap0071455	N24-Ap0071456
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	112	84	85
p-Terphenyl-d14 (surr.)	1	%	95	118	96	80
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	-

Client Sample ID			TP18 0.4-0.5	TP19 0-0.1	DUP2	TP19 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071453	N24-Ap0071454	N24-Ap0071455	N24-Ap0071456
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	115	88	-
Tetrachloro-m-xylene (surr.)	1	%	-	110	86	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	-	< 2	< 2	-
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	-
EPN	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	-
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	-	< 2	< 2	-
Naled	0.2	mg/kg	-	< 0.2	< 0.2	-
Omethoate	2	mg/kg	-	< 2	< 2	-
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	-	115	99	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	-

Client Sample ID			TP18 0.4-0.5	TP19 0-0.1	DUP2	TP19 0.3-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071453	N24-Ap0071454	N24-Ap0071455	N24-Ap0071456
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	115	88	-
Tetrachloro-m-xylene (surr.)	1	%	-	110	86	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	-
Pentachlorophenol	1	mg/kg	-	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	-
2-Nitrophenol	1	mg/kg	-	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	-
Total cresols*	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Nitrophenol	5	mg/kg	-	< 5	< 5	-
Dinoseb	20	mg/kg	-	< 20	< 20	-
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	-
Phenol-d6 (surr.)	1	%	-	88	74	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	< 20	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	-	-
13C2-6:2 FTSA (surr.)	1	%	-	107	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	-	-
18O2-PFHxS (surr.)	1	%	-	95	-	-
13C8-PFOS (surr.)	1	%	-	103	-	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	-	-
13C8-PFOA (surr.)	1	%	-	96	-	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	-	-

Client Sample ID			TP19 0.4-0.5	TP20 0-0.1	TP21 0-0.1	TP/HA22 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071457	N24-Ap0071459	N24-Ap0071461	N24-Ap0071462
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.1	< 2	7.4	4.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	29	14	11
Copper	5	mg/kg	< 5	18	5.9	6.9
Lead	5	mg/kg	65	< 5	47	8.4
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	19	5.5	< 5
Zinc	5	mg/kg	49	48	69	30
Sample Properties						
% Moisture	1	%	14	6.4	8.6	18
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	53	< 50	82	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	53	< 50	82	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	104	94	93	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP19 0.4-0.5	TP20 0-0.1	TP21 0-0.1	TP/HA22 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071457	N24-Ap0071459	N24-Ap0071461	N24-Ap0071462
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	139	106	82	117
p-Terphenyl-d14 (surr.)	1	%	132	106	84	131
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	-	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	99	81	-
Tetrachloro-m-xylene (surr.)	1	%	-	97	83	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	-	< 2	< 2	-
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	-
EPN	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	-

Client Sample ID			TP19 0.4-0.5	TP20 0-0.1	TP21 0-0.1	TP/HA22 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071457	N24-Ap0071459	N24-Ap0071461	N24-Ap0071462
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	-	< 2	< 2	-
Naled	0.2	mg/kg	-	< 0.2	< 0.2	-
Omethoate	2	mg/kg	-	< 2	< 2	-
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	-	102	80	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	99	81	-
Tetrachloro-m-xylene (surr.)	1	%	-	97	83	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	< 1	< 1	-
Pentachlorophenol	1	mg/kg	-	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	-
2-Nitrophenol	1	mg/kg	-	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	< 0.2	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	< 0.4	< 0.4	-
Total cresols*	0.5	mg/kg	-	< 0.5	< 0.5	-

Client Sample ID			TP19 0.4-0.5	TP20 0-0.1	TP21 0-0.1	TP/HA22 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071457	N24-Ap0071459	N24-Ap0071461	N24-Ap0071462
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	-	< 5	< 5	-
Dinoseb	20	mg/kg	-	< 20	< 20	-
Phenol	0.5	mg/kg	-	< 0.5	< 0.5	-
Phenol-d6 (surr.)	1	%	-	82	59	-
Total Non-Halogenated Phenol*	20	mg/kg	-	< 20	< 20	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	110	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	110	< 100
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	< 10	< 10	-
13C2-6:2 FTSA (surr.)	1	%	-	107	68	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	< 5	< 5	-
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	< 5	< 5	-
18O2-PFHxS (surr.)	1	%	-	96	97	-
13C8-PFOS (surr.)	1	%	-	100	93	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	< 5	< 5	-
13C8-PFOA (surr.)	1	%	-	102	86	-
Sum (PFHxS + PFOS)*	5	ug/kg	-	< 5	< 5	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	< 5	< 5	-

Client Sample ID			DUP3	TP/HA22 0.2-0.3	TP5 0.4-0.5	TP9 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071463	N24-Ap0071464	N24-Ap0071483	N24-Ap0071489
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	7.5	20	< 2	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	22	< 5	18
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	8.8	10	< 5	10
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	5.3
Zinc	5	mg/kg	21	6.0	< 5	25
Sample Properties						
% Moisture	1	%	17	10	8.8	11
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			DUP3	TP/HA22 0.2-0.3	TP5 0.4-0.5	TP9 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071463	N24-Ap0071464	N24-Ap0071483	N24-Ap0071489
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	82	92	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	113	96	91	85
p-Terphenyl-d14 (surr.)	1	%	117	109	109	94
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-HCH	0.05	mg/kg	-	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05

Client Sample ID			DUP3	TP/HA22 0.2-0.3	TP5 0.4-0.5	TP9 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071463	N24-Ap0071464	N24-Ap0071483	N24-Ap0071489
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	0.5	mg/kg	-	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	101
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	91
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	-	< 0.2
Bolstar	0.2	mg/kg	-	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	-	< 0.2
Coumaphos	2	mg/kg	-	-	-	< 2
Demeton-S	0.2	mg/kg	-	-	-	< 0.2
Demeton-O	0.2	mg/kg	-	-	-	< 0.2
Diazinon	0.2	mg/kg	-	-	-	< 0.2
Dichlorvos	0.2	mg/kg	-	-	-	< 0.2
Dimethoate	0.2	mg/kg	-	-	-	< 0.2
Disulfoton	0.2	mg/kg	-	-	-	< 0.2
EPN	0.2	mg/kg	-	-	-	< 0.2
Ethion	0.2	mg/kg	-	-	-	< 0.2
Ethoprop	0.2	mg/kg	-	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	-	< 0.2
Fenitrothion	0.2	mg/kg	-	-	-	< 0.2
Fensulfothion	0.2	mg/kg	-	-	-	< 0.2
Fenthion	0.2	mg/kg	-	-	-	< 0.2
Malathion	0.2	mg/kg	-	-	-	< 0.2
Merphos	0.2	mg/kg	-	-	-	< 0.2
Methyl parathion	0.2	mg/kg	-	-	-	< 0.2
Mevinphos	0.2	mg/kg	-	-	-	< 0.2
Monocrotophos	2	mg/kg	-	-	-	< 2
Naled	0.2	mg/kg	-	-	-	< 0.2
Omethoate	2	mg/kg	-	-	-	< 2
Phorate	0.2	mg/kg	-	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	-	< 0.2
Pyrazophos	0.2	mg/kg	-	-	-	< 0.2
Ronnel	0.2	mg/kg	-	-	-	< 0.2
Terbufos	0.2	mg/kg	-	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	-	< 0.2

Client Sample ID			DUP3	TP/HA22 0.2-0.3	TP5 0.4-0.5	TP9 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071463	N24-Ap0071464	N24-Ap0071483	N24-Ap0071489
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Tokuthion	0.2	mg/kg	-	-	-	< 0.2
Trichloronate	0.2	mg/kg	-	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	-	117
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	101
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	91
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Nitrophenol	1	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Total cresols*	0.5	mg/kg	-	-	-	< 0.5
4-Nitrophenol	5	mg/kg	-	-	-	< 5
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	73
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			DUP3	TP/HA22 0.2-0.3	TP5 0.4-0.5	TP9 0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			N24-Ap0071463	N24-Ap0071464	N24-Ap0071483	N24-Ap0071489
Date Sampled			Apr 24, 2024	Apr 24, 2024	Apr 23, 2024	Apr 23, 2024
Test/Reference	LOR	Unit				
Per- and Polyfluoroalkyl Substances (PFASs) - Short						
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	-	-	-	< 10
13C2-6:2 FTSA (surr.)	1	%	-	-	-	104
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	-	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	-	< 5
18O2-PFHxS (surr.)	1	%	-	-	-	90
13C8-PFOS (surr.)	1	%	-	-	-	102
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	-	-	-	< 5
13C8-PFOA (surr.)	1	%	-	-	-	85
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	-	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	-	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	-	< 5

Client Sample ID			TS	TB	TS	TB
Sample Matrix			Trip Spike (solid)	Trip Blank (solid)	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			N24-Ap0071506	N24-Ap0071508	N24-Ap0071509	N24-Ap0071511
Date Sampled			Apr 22, 2024	Apr 22, 2024	Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	< 20
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	87	-	91
TRH C6-C10	1	%	75	-	96	-
Total Recoverable Hydrocarbons						
Naphthalene	1	%	93	-	98	-
TRH C6-C9	1	%	75	-	97	-
TRH C6-C10	20	mg/kg	-	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	-	< 20
BTEX						
Benzene	1	%	79	-	94	-
Ethylbenzene	1	%	79	-	110	-
m&p-Xylenes	1	%	77	-	92	-
o-Xylene	1	%	79	-	110	-
Toluene	1	%	79	-	92	-
Xylenes - Total	1	%	78	-	100	-
4-Bromofluorobenzene (surr.)	1	%	86	-	89	-
BTEX and Naphthalene						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	-	< 0.5

Client Sample ID			TS	TB
Sample Matrix			Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			N24-Ap0071512	N24-Ap0071514
Date Sampled			Apr 22, 2024	Apr 22, 2024
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	-	< 20
BTEX				
Benzene	0.1	mg/kg	-	< 0.1
Toluene	0.1	mg/kg	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	99
TRH C6-C10	1	%	100	-
Total Recoverable Hydrocarbons				
Naphthalene	1	%	90	-
TRH C6-C9	1	%	100	-
TRH C6-C10	20	mg/kg	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20
BTEX				
Benzene	1	%	96	-
Ethylbenzene	1	%	100	-
m&p-Xylenes	1	%	100	-
o-Xylene	1	%	100	-
Toluene	1	%	110	-
Xylenes - Total	1	%	100	-
4-Bromofluorobenzene (surr.)	1	%	124	-
BTEX and Naphthalene				
Naphthalene[N02]	0.5	mg/kg	-	< 0.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	May 12, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
NEPM Screen for Soil Classification			
Heavy Metals	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Clay	Brisbane	May 13, 2024	14 Days
- Method: LTM-GEN-7040 Percentage clay, silt and sand by Hydrometer			
Conductivity (1:5 aqueous extract at 25 °C as rec.)	Sydney	May 03, 2024	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25 °C as rec.)	Sydney	May 03, 2024	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Cation Exchange Capacity	Melbourne	May 07, 2024	28 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
Total Organic Carbon*	Sydney	May 13, 2024	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
% Moisture	Sydney	Apr 29, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
BTEX	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons	Sydney	May 02, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			

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Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
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NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X						
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X						
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID												
1	AHA101 0-0.1	Apr 22, 2024		Soil	N24-Ap0071403					X			X						
2	AHA102 0-0.01	Apr 22, 2024		Soil	N24-Ap0071404					X			X						
3	AHA103 0-0.1	Apr 22, 2024		Soil	N24-Ap0071405					X			X						
4	AHA103 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071406					X			X						
5	AHA104 0-0.1	Apr 22, 2024		Soil	N24-Ap0071407					X			X						
6	AHA105 0-0.1	Apr 22, 2024		Soil	N24-Ap0071408					X			X						
7	AHA105 0.2-0.25	Apr 22, 2024		Soil	N24-Ap0071409					X			X						
8	AHA106 0-0.1	Apr 22, 2024		Soil	N24-Ap0071410					X			X						
9	AHA107 0-0.1	Apr 22, 2024		Soil	N24-Ap0071411					X			X						

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
10	DUP1	Apr 22, 2024		Soil	N24-Ap0071412					X			X							
11	AHA108 0.02-0.1	Apr 22, 2024		Soil	N24-Ap0071413					X			X							
12	AHA109 0-0.1	Apr 22, 2024		Soil	N24-Ap0071414					X			X							
13	AHA110 0-0.1	Apr 22, 2024		Soil	N24-Ap0071415					X			X							
14	AHA111 0-0.1	Apr 22, 2024		Soil	N24-Ap0071416					X			X							
15	DUP4	Apr 22, 2024		Soil	N24-Ap0071417					X			X							
16	AHA112 0-0.1	Apr 22, 2024		Soil	N24-Ap0071418					X			X							
17	AHA113 0-0.1	Apr 22, 2024		Soil	N24-Ap0071419					X			X							
18	AHA113 0.1-0.2	Apr 22, 2024		Soil	N24-Ap0071420					X			X							
19	TP1 0-0.1	Apr 23, 2024		Soil	N24-Ap0071421						X	X	X	X			X			
20	TP1 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071422								X		X					
21	TP2 0-0.1	Apr 23, 2024		Soil	N24-Ap0071423		X					X	X				X		X	

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Project ID: 304100928

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Fax:

Received: Apr 29, 2024 10:54 AM
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Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
22	TP2 0.2-0.3	Apr 23, 2024		Soil	N24-Ap0071424								X		X					
23	TP3 0-0.1	Apr 23, 2024		Soil	N24-Ap0071425		X					X	X				X		X	
24	TP4 0-0.1	Apr 23, 2024		Soil	N24-Ap0071426		X					X	X				X		X	
25	TP4 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071427								X		X					
26	TP5 0-0.1	Apr 23, 2024		Soil	N24-Ap0071428		X					X	X				X		X	
27	TP5 0.9-1	Apr 23, 2024		Soil	N24-Ap0071429				X											
28	TP5 1.4-1.5	Apr 23, 2024		Soil	N24-Ap0071430								X		X					
29	TP5 2.2-2.3	Apr 23, 2024		Soil	N24-Ap0071431								X		X					
30	TP6 0-0.1	Apr 23, 2024		Soil	N24-Ap0071432		X					X	X				X		X	
31	TP6 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071433								X		X					
32	TP7 0-0.1	Apr 23, 2024		Soil	N24-Ap0071434		X					X	X				X		X	
33	TP8 0-0.1	Apr 23, 2024		Soil	N24-Ap0071435		X					X	X				X		X	
34	TP8 0.9-1	Apr 23, 2024		Soil	N24-Ap0071436								X		X					
35	TP10 0-0.1	Apr 23, 2024		Soil	N24-Ap0071437		X					X	X				X		X	

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Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
36	TP10 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071438								X		X					
37	TP10 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071439								X		X					
38	TP11 0-0.1	Apr 23, 2024		Soil	N24-Ap0071440		X					X	X				X			
39	TP12 0-0.1	Apr 23, 2024		Soil	N24-Ap0071441		X					X	X				X		X	
40	TP12 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071442								X		X					
41	TP13 0-0.1	Apr 23, 2024		Soil	N24-Ap0071443		X					X	X				X			
42	TP13 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071444						X		X	X	X					
43	TP14 0-0.1	Apr 23, 2024		Soil	N24-Ap0071445		X					X	X				X		X	
44	TP15 0-0.1	Apr 23, 2024		Soil	N24-Ap0071446		X					X	X				X		X	
45	TP16 0-0.1	Apr 23, 2024		Soil	N24-Ap0071447		X					X	X				X		X	
46	TP16 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071448			X												
47	TP17 0-0.1	Apr 24, 2024		Soil	N24-Ap0071449		X					X	X				X		X	
48	TP17 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071450								X		X					
49	TP17 1-1.1	Apr 24, 2024		Soil	N24-Ap0071451								X			X				

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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NSW 2065

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Project Name: Gilleston Heights
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Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
50	TP18 0-0.1	Apr 24, 2024		Soil	N24-Ap0071452		X					X	X				X		X	
51	TP18 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071453								X		X					
52	TP19 0-0.1	Apr 24, 2024		Soil	N24-Ap0071454		X					X	X				X		X	
53	DUP2	Apr 24, 2024		Soil	N24-Ap0071455							X	X				X			
54	TP19 0.3-0.4	Apr 24, 2024		Soil	N24-Ap0071456	X							X		X					
55	TP19 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071457		X						X		X					
56	TP19 0.8-0.9	Apr 24, 2024		Soil	N24-Ap0071458		X													
57	TP20 0-0.1	Apr 24, 2024		Soil	N24-Ap0071459		X					X	X				X		X	
58	TP20 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071460		X													
59	TP21 0-0.1	Apr 24, 2024		Soil	N24-Ap0071461		X					X	X				X		X	
60	TP/HA22 0-0.1	Apr 24, 2024		Soil	N24-Ap0071462		X						X		X					
61	DUP3	Apr 24, 2024		Soil	N24-Ap0071463								X		X					
62	TP/HA22 0.2-0.3	Apr 24, 2024		Soil	N24-Ap0071464								X		X					

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
63	RIN22/4/24	Apr 22, 2024		Water	N24-Ap0071465					X										
64	RIN23/4/24	Apr 23, 2024		Water	N24-Ap0071466							X					X		X	
65	RIN24/4/24	Apr 24, 2024		Water	N24-Ap0071467							X					X		X	
66	AHA101 0.2-0.3	Apr 22, 2024		Soil	N24-Ap0071468				X											
67	AHA102 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071469				X											
68	AHA104 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071470				X											
69	AHA106 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071471				X											
70	AHA107 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071472				X											
71	AHA108 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071473				X											
72	AHA109 0.35-	Apr 22, 2024		Soil	N24-Ap0071474				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
72	AHA109 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071474															
73	AHA110 0.25-0.3	Apr 22, 2024		Soil	N24-Ap0071475				X											
74	AHA111 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071476				X											
75	AHA112 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071477			X												
76	TP1 0.3-0.4	Apr 23, 2024		Soil	N24-Ap0071478				X											
77	TP2 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071479				X											
78	TP3 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071480				X											
79	TP3 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071481				X											
80	TP4 1-1.1	Apr 23, 2024		Soil	N24-Ap0071482				X											
81	TP5 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071483		X						X		X					
82	TP5 1.8-1.9	Apr 23, 2024		Soil	N24-Ap0071484				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
83	TP6 1-1.1	Apr 23, 2024		Soil	N24-Ap0071485				X											
84	TP7 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071486				X											
85	TP7 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071487				X											
86	TP8 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071488				X											
87	TP9 0-0.1	Apr 23, 2024		Soil	N24-Ap0071489		X					X	X				X		X	
88	TP9 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071490				X											
89	TP9 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071491				X											
90	TP11 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071492				X											
91	TP11 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071493				X											
92	TP12 0.65-0.75	Apr 23, 2024		Soil	N24-Ap0071494				X											
93	TP13 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071495				X											
94	TP14 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071496				X											
95	TP14 1-1.1	Apr 23, 2024		Soil	N24-Ap0071497				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
96	TP15 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071498				X											
97	TP15 1.1-1.2	Apr 23, 2024		Soil	N24-Ap0071499				X											
98	TP16 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071500				X											
99	TP18 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071501				X											
100	TP19 1.2-1.3	Apr 24, 2024		Soil	N24-Ap0071502				X											
101	TP20 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071503				X											
102	TP21 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071504				X											
103	TP21 1-1.1	Apr 24, 2024		Soil	N24-Ap0071505				X											
104	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071506															X
105	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071508													X		
106	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071509															X
107	TB	Apr 22, 2024		Trip Blank	N24-Ap0071511													X		

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Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
				(solid)																
108	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071512															X
109	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071514													X		
110	DUP 1	Apr 22, 2024		Water	N24-Ap0071908				X											
111	SW1	Apr 22, 2024		Water	N24-Ap0071909				X											
112	AHA13 0.15-0.2	Apr 22, 2024		Soil	N24-Ap0071953				X											
113	SED1	Apr 22, 2024		Soil	N24-Ap0071954				X											
114	TP10 0.5-0.6	Apr 22, 2024		Soil	N24-Ap0071955				X											
115	TP4 0.8-0.9	Apr 22, 2024		Soil	N24-Ap0071956				X											
116	TP16 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071976				X											
Test Counts						1	25	2	43	21	2	24	60	2	19	1	24	3	20	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25 °C as rec.)	uS/cm	< 10			10	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.5			0.5	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (non-Halogenated)							
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
Method Blank							
Heavy Metals							
Iron	mg/kg	< 20			20	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25 °C as rec.)	uS/cm	< 10			10	Pass	
Total Organic Carbon*	%	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
Sum of US EPA PFAS (PFOS + PFOA)*	ug/kg	-			5	N/A	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (non-Halogenated)							
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	116			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	103			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	97			80-120	Pass	
Mercury	%	103			80-120	Pass	
Nickel	%	103			80-120	Pass	
Zinc	%	102			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	86			80-120	Pass	
Cadmium	%	88			80-120	Pass	
Chromium	%	89			80-120	Pass	
Copper	%	90			80-120	Pass	
Iron	%	86			80-120	Pass	
Lead	%	87			80-120	Pass	
Mercury	%	96			80-120	Pass	
Nickel	%	90			80-120	Pass	
Zinc	%	89			80-120	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	106			80-120	Pass	
Copper	%	106			80-120	Pass	
Mercury	%	108			80-120	Pass	
Nickel	%	106			80-120	Pass	
Zinc	%	107			80-120	Pass	
LCS - % Recovery							
Conductivity (1:5 aqueous extract at 25 °C as rec.)	%	107			70-130	Pass	
LCS - % Recovery							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	100			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	77			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	76			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96			50-150	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	108			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	95			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
o-Xylene	%	104			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	101			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	98			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	102			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	100			70-130	Pass	
Benzo(b&j)fluoranthene	%	84			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	
Benzo(k)fluoranthene	%	104			70-130	Pass	
Chrysene	%	106			70-130	Pass	
Dibenz(a.h)anthracene	%	99			70-130	Pass	
Fluoranthene	%	102			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	102			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
Phenanthrene	%	93			70-130	Pass	
Pyrene	%	101			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	107			70-130	Pass	
4.4'-DDD	%	96			70-130	Pass	
4.4'-DDE	%	110			70-130	Pass	
4.4'-DDT	%	95			70-130	Pass	
a-HCH	%	105			70-130	Pass	
Aldrin	%	109			70-130	Pass	
b-HCH	%	103			70-130	Pass	
d-HCH	%	106			70-130	Pass	
Dieldrin	%	107			70-130	Pass	
Endosulfan I	%	104			70-130	Pass	
Endosulfan II	%	99			70-130	Pass	
Endosulfan sulphate	%	102			70-130	Pass	
Endrin	%	110			70-130	Pass	
Endrin aldehyde	%	105			70-130	Pass	
Endrin ketone	%	96			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
g-HCH (Lindane)	%	112			70-130	Pass	
Heptachlor	%	110			70-130	Pass	
Heptachlor epoxide	%	105			70-130	Pass	
Hexachlorobenzene	%	110			70-130	Pass	
Methoxychlor	%	92			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	112			70-130	Pass	
Dimethoate	%	86			70-130	Pass	
Ethion	%	102			70-130	Pass	
Fenitrothion	%	74			70-130	Pass	
Methyl parathion	%	104			70-130	Pass	
Mevinphos	%	94			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	88			70-130	Pass	
Aroclor-1260	%	113			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	91			25-140	Pass	
2.4-Dichlorophenol	%	98			25-140	Pass	
2.4.5-Trichlorophenol	%	84			25-140	Pass	
2.4.6-Trichlorophenol	%	94			25-140	Pass	
2.6-Dichlorophenol	%	95			25-140	Pass	
4-Chloro-3-methylphenol	%	93			25-140	Pass	
Pentachlorophenol	%	92			25-140	Pass	
Tetrachlorophenols - Total	%	93			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	85			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	84			25-140	Pass	
2-Nitrophenol	%	97			25-140	Pass	
2.4-Dimethylphenol	%	97			25-140	Pass	
2.4-Dinitrophenol	%	83			25-140	Pass	
2-Methylphenol (o-Cresol)	%	86			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	99			25-140	Pass	
4-Nitrophenol	%	86			25-140	Pass	
Dinoseb	%	92			25-140	Pass	
Phenol	%	91			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	93			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	104			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	112			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	%	104			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	102			70-130	Pass	
TRH C6-C10	%	100			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	124			70-130	Pass	
Acenaphthylene	%	127			70-130	Pass	
Benz(a)anthracene	%	118			70-130	Pass	
Benzo(a)pyrene	%	126			70-130	Pass	
Benzo(b&j)fluoranthene	%	120			70-130	Pass	
Benzo(g.h.i)perylene	%	125			70-130	Pass	
Benzo(k)fluoranthene	%	126			70-130	Pass	
Dibenz(a.h)anthracene	%	119			70-130	Pass	
Fluorene	%	129			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	123			70-130	Pass	
Naphthalene	%	124			70-130	Pass	
Phenanthrene	%	123			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDD	%	125			70-130	Pass	
a-HCH	%	126			70-130	Pass	
b-HCH	%	127			70-130	Pass	
Endosulfan II	%	124			70-130	Pass	
Endosulfan sulphate	%	126			70-130	Pass	
Endrin aldehyde	%	129			70-130	Pass	
Endrin ketone	%	116			70-130	Pass	
Heptachlor epoxide	%	130			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Dimethoate	%	117			70-130	Pass	
Ethion	%	130			70-130	Pass	
Fenitrothion	%	96			70-130	Pass	
Methyl parathion	%	128			70-130	Pass	
Mevinphos	%	120			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	105			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	120			25-140	Pass	
2.4-Dichlorophenol	%	123			25-140	Pass	
2.4.5-Trichlorophenol	%	113			25-140	Pass	
2.4.6-Trichlorophenol	%	120			25-140	Pass	
2.6-Dichlorophenol	%	124			25-140	Pass	
4-Chloro-3-methylphenol	%	123			25-140	Pass	
Pentachlorophenol	%	124			25-140	Pass	
Tetrachlorophenols - Total	%	123			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	128			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	122			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	%	124			25-140	Pass	
2.4-Dimethylphenol	%	126			25-140	Pass	
2.4-Dinitrophenol	%	123			25-140	Pass	
2-Methylphenol (o-Cresol)	%	122			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	129			25-140	Pass	
Phenol	%	125			25-140	Pass	
LCS - % Recovery							
Heavy Metals							
Iron	%	97			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	90			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	93			70-130	Pass	
Ethylbenzene	%	105			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	92			70-130	Pass	
Xylenes - Total*	%	101			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	92			70-130	Pass	
TRH C6-C10	%	87			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	125			70-130	Pass	
Acenaphthylene	%	124			70-130	Pass	
Anthracene	%	123			70-130	Pass	
Benz(a)anthracene	%	116			70-130	Pass	
Benzo(a)pyrene	%	128			70-130	Pass	
Benzo(b&j)fluoranthene	%	110			70-130	Pass	
Benzo(g.h.i)perylene	%	127			70-130	Pass	
Dibenz(a.h)anthracene	%	123			70-130	Pass	
Fluoranthene	%	128			70-130	Pass	
Fluorene	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	129			70-130	Pass	
Naphthalene	%	123			70-130	Pass	
Phenanthrene	%	120			70-130	Pass	
Pyrene	%	127			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	128			70-130	Pass	
4.4'-DDD	%	123			70-130	Pass	
4.4'-DDT	%	126			70-130	Pass	
a-HCH	%	125			70-130	Pass	
b-HCH	%	127			70-130	Pass	
d-HCH	%	126			70-130	Pass	
Endosulfan I	%	125			70-130	Pass	
Endosulfan II	%	123			70-130	Pass	
Endosulfan sulphate	%	123			70-130	Pass	
Endrin aldehyde	%	130			70-130	Pass	
Endrin ketone	%	120			70-130	Pass	
g-HCH (Lindane)	%	130			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide	%	129			70-130	Pass	
Hexachlorobenzene	%	129			70-130	Pass	
Methoxychlor	%	127			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	104			70-130	Pass	
LCS - % Recovery							
Conductivity (1:5 aqueous extract at 25 °C as rec.)	%	105			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	101			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	
Anthracene	%	100			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	%	105			70-130	Pass	
Benzo(g.h.i)perylene	%	103			70-130	Pass	
Benzo(k)fluoranthene	%	92			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	101			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	105			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	105			70-130	Pass	
Pyrene	%	103			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	103			70-130	Pass	
4.4'-DDD	%	105			70-130	Pass	
4.4'-DDE	%	108			70-130	Pass	
4.4'-DDT	%	104			70-130	Pass	
a-HCH	%	101			70-130	Pass	
Aldrin	%	109			70-130	Pass	
b-HCH	%	104			70-130	Pass	
d-HCH	%	101			70-130	Pass	
Dieldrin	%	106			70-130	Pass	
Endosulfan I	%	102			70-130	Pass	
Endosulfan II	%	98			70-130	Pass	
Endosulfan sulphate	%	100			70-130	Pass	
Endrin	%	96			70-130	Pass	
Endrin aldehyde	%	107			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-HCH (Lindane)	%	104			70-130	Pass	
Heptachlor	%	102			70-130	Pass	
Heptachlor epoxide	%	101			70-130	Pass	
Hexachlorobenzene	%	107			70-130	Pass	
Methoxychlor	%	98			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	97			70-130	Pass	
Ethion	%	119			70-130	Pass	
Fenitrothion	%	89			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methyl parathion	%	112			70-130	Pass	
Mevinphos	%	95			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	77			70-130	Pass	
Aroclor-1260	%	102			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	96			25-140	Pass	
2.4-Dichlorophenol	%	100			25-140	Pass	
2.4.5-Trichlorophenol	%	103			25-140	Pass	
2.4.6-Trichlorophenol	%	92			25-140	Pass	
2.6-Dichlorophenol	%	100			25-140	Pass	
4-Chloro-3-methylphenol	%	101			25-140	Pass	
Pentachlorophenol	%	106			25-140	Pass	
Tetrachlorophenols - Total	%	99			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	103			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	101			25-140	Pass	
2-Nitrophenol	%	100			25-140	Pass	
2.4-Dimethylphenol	%	99			25-140	Pass	
2.4-Dinitrophenol	%	97			25-140	Pass	
2-Methylphenol (o-Cresol)	%	100			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	99			25-140	Pass	
4-Nitrophenol	%	91			25-140	Pass	
Dinoseb	%	103			25-140	Pass	
Phenol	%	95			25-140	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	102			70-130	Pass	
Acenaphthylene	%	101			70-130	Pass	
Anthracene	%	102			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	%	110			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	95			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a.h)anthracene	%	99			70-130	Pass	
Fluoranthene	%	105			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	100			70-130	Pass	
Naphthalene	%	97			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	106			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	94			25-140	Pass	
2.4-Dichlorophenol	%	98			25-140	Pass	
2.4.5-Trichlorophenol	%	96			25-140	Pass	
2.4.6-Trichlorophenol	%	92			25-140	Pass	
2.6-Dichlorophenol	%	98			25-140	Pass	
4-Chloro-3-methylphenol	%	99			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	105			25-140	Pass	
Tetrachlorophenols - Total	%	95			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	124			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	115			25-140	Pass	
2-Nitrophenol	%	97			25-140	Pass	
2.4-Dimethylphenol	%	97			25-140	Pass	
2.4-Dinitrophenol	%	113			25-140	Pass	
2-Methylphenol (o-Cresol)	%	98			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	97			25-140	Pass	
4-Nitrophenol	%	95			25-140	Pass	
Dinoseb	%	118			25-140	Pass	
Phenol	%	94			25-140	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	86			70-130	Pass	
Acenaphthylene	%	84			70-130	Pass	
Anthracene	%	83			70-130	Pass	
Benz(a)anthracene	%	79			70-130	Pass	
Benzo(a)pyrene	%	83			70-130	Pass	
Benzo(b&j)fluoranthene	%	71			70-130	Pass	
Benzo(g.h.i)perylene	%	74			70-130	Pass	
Benzo(k)fluoranthene	%	75			70-130	Pass	
Chrysene	%	84			70-130	Pass	
Dibenz(a.h)anthracene	%	74			70-130	Pass	
Fluoranthene	%	78			70-130	Pass	
Fluorene	%	83			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	75			70-130	Pass	
Naphthalene	%	83			70-130	Pass	
Phenanthrene	%	87			70-130	Pass	
Pyrene	%	77			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	83			70-130	Pass	
4.4'-DDD	%	90			70-130	Pass	
4.4'-DDE	%	84			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-HCH	%	83			70-130	Pass	
Aldrin	%	75			70-130	Pass	
b-HCH	%	84			70-130	Pass	
d-HCH	%	83			70-130	Pass	
Dieldrin	%	80			70-130	Pass	
Endosulfan I	%	79			70-130	Pass	
Endosulfan II	%	78			70-130	Pass	
Endosulfan sulphate	%	77			70-130	Pass	
Endrin	%	84			70-130	Pass	
Endrin aldehyde	%	79			70-130	Pass	
Endrin ketone	%	82			70-130	Pass	
g-HCH (Lindane)	%	90			70-130	Pass	
Heptachlor	%	82			70-130	Pass	
Heptachlor epoxide	%	78			70-130	Pass	
Hexachlorobenzene	%	85			70-130	Pass	
Methoxychlor	%	75			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	84			70-130	Pass	
Dimethoate	%	74			70-130	Pass	
Ethion	%	92			70-130	Pass	
Methyl parathion	%	89			70-130	Pass	
Mevinphos	%	78			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	83			70-130	Pass	
Aroclor-1260	%	86			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	75			25-140	Pass	
2.4-Dichlorophenol	%	79			25-140	Pass	
2.4.5-Trichlorophenol	%	73			25-140	Pass	
2.4.6-Trichlorophenol	%	75			25-140	Pass	
2.6-Dichlorophenol	%	76			25-140	Pass	
4-Chloro-3-methylphenol	%	75			25-140	Pass	
Pentachlorophenol	%	71			25-140	Pass	
Tetrachlorophenols - Total	%	72			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	75			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	76			25-140	Pass	
2-Nitrophenol	%	75			25-140	Pass	
2.4-Dimethylphenol	%	76			25-140	Pass	
2.4-Dinitrophenol	%	74			25-140	Pass	
2-Methylphenol (o-Cresol)	%	75			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	76			25-140	Pass	
Dinoseb	%	76			25-140	Pass	
Phenol	%	74			25-140	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	93			70-130	Pass	
Benzo(a)pyrene	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	%	86			70-130	Pass	
Benzo(g.h.i)perylene	%	105			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	104			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	99			70-130	Pass	
Fluorene	%	101			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	102			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	94			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	104			70-130	Pass	
4.4'-DDD	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDE	%	102			70-130	Pass	
4.4'-DDT	%	94			70-130	Pass	
a-HCH	%	97			70-130	Pass	
Aldrin	%	98			70-130	Pass	
b-HCH	%	94			70-130	Pass	
d-HCH	%	94			70-130	Pass	
Dieldrin	%	101			70-130	Pass	
Endosulfan I	%	100			70-130	Pass	
Endosulfan II	%	99			70-130	Pass	
Endosulfan sulphate	%	106			70-130	Pass	
Endrin	%	94			70-130	Pass	
Endrin aldehyde	%	95			70-130	Pass	
Endrin ketone	%	101			70-130	Pass	
g-HCH (Lindane)	%	103			70-130	Pass	
Heptachlor	%	96			70-130	Pass	
Heptachlor epoxide	%	94			70-130	Pass	
Hexachlorobenzene	%	99			70-130	Pass	
Methoxychlor	%	90			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	104			70-130	Pass	
Dimethoate	%	78			70-130	Pass	
Ethion	%	111			70-130	Pass	
Fenitrothion	%	80			70-130	Pass	
Methyl parathion	%	89			70-130	Pass	
Mevinphos	%	89			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	73			70-130	Pass	
Aroclor-1260	%	102			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	94			25-140	Pass	
2.4-Dichlorophenol	%	92			25-140	Pass	
2.4.5-Trichlorophenol	%	99			25-140	Pass	
2.4.6-Trichlorophenol	%	87			25-140	Pass	
2.6-Dichlorophenol	%	95			25-140	Pass	
4-Chloro-3-methylphenol	%	98			25-140	Pass	
Pentachlorophenol	%	84			25-140	Pass	
Tetrachlorophenols - Total	%	93			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Nitrophenol	%	100			25-140	Pass	
2.4-Dimethylphenol	%	97			25-140	Pass	
2-Methylphenol (o-Cresol)	%	98			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	96			25-140	Pass	
Phenol	%	98			25-140	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	101			70-130	Pass	
Acenaphthylene	%	84			70-130	Pass	
Anthracene	%	96			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(b&j)fluoranthene	%	90			70-130	Pass	
Benzo(g.h.i)perylene	%	116			70-130	Pass	
Benzo(k)fluoranthene	%	111			70-130	Pass	
Chrysene	%	110			70-130	Pass	
Dibenz(a.h)anthracene	%	91			70-130	Pass	
Fluoranthene	%	107			70-130	Pass	
Fluorene	%	78			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	94			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	88			70-130	Pass	
Pyrene	%	94			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	80			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	77			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	109			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	83			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	105			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	104			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	89			70-130	Pass	
TRH C6-C10	%	109			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N24-Ap0071414	CP	%	102			75-125	Pass	
Cadmium	N24-Ap0071414	CP	%	103			75-125	Pass	
Chromium	N24-Ap0071414	CP	%	96			75-125	Pass	
Copper	N24-Ap0071414	CP	%	97			75-125	Pass	
Lead	N24-Ap0071414	CP	%	94			75-125	Pass	
Mercury	N24-Ap0071414	CP	%	96			75-125	Pass	
Nickel	N24-Ap0071414	CP	%	95			75-125	Pass	
Zinc	N24-Ap0071414	CP	%	114			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-My0010768	NCP	%	106			70-130	Pass	
Acenaphthylene	S24-My0010768	NCP	%	98			70-130	Pass	
Anthracene	S24-My0010768	NCP	%	99			70-130	Pass	
Benz(a)anthracene	S24-My0010768	NCP	%	110			70-130	Pass	
Benzo(a)pyrene	S24-My0010768	NCP	%	107			70-130	Pass	
Benzo(b&j)fluoranthene	S24-My0010768	NCP	%	116			70-130	Pass	
Benzo(g.h.i)perylene	S24-My0010768	NCP	%	101			70-130	Pass	
Benzo(k)fluoranthene	S24-My0010768	NCP	%	106			70-130	Pass	
Chrysene	S24-My0010768	NCP	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dibenz(a.h)anthracene	S24-My0010768	NCP	%	113			70-130	Pass	
Fluoranthene	S24-My0010768	NCP	%	97			70-130	Pass	
Fluorene	S24-My0010768	NCP	%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-My0010768	NCP	%	112			70-130	Pass	
Naphthalene	S24-My0010768	NCP	%	104			70-130	Pass	
Phenanthrene	S24-My0010768	NCP	%	109			70-130	Pass	
Pyrene	S24-My0010768	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-My0014976	NCP	%	101			70-130	Pass	
4.4'-DDD	S24-My0014976	NCP	%	86			70-130	Pass	
4.4'-DDE	S24-Ap0073090	NCP	%	75			70-130	Pass	
4.4'-DDT	S24-My0014976	NCP	%	76			70-130	Pass	
a-HCH	S24-Ap0073090	NCP	%	75			70-130	Pass	
Aldrin	S24-Ap0073090	NCP	%	89			70-130	Pass	
b-HCH	S24-My0014976	NCP	%	76			70-130	Pass	
d-HCH	S24-Ap0073090	NCP	%	76			70-130	Pass	
Dieldrin	S24-Ap0073090	NCP	%	87			70-130	Pass	
Endosulfan I	S24-My0014976	NCP	%	106			70-130	Pass	
Endosulfan II	S24-My0014976	NCP	%	95			70-130	Pass	
Endosulfan sulphate	S24-My0014976	NCP	%	92			70-130	Pass	
Endrin	S24-My0014976	NCP	%	91			70-130	Pass	
Endrin aldehyde	S24-Ap0073090	NCP	%	70			70-130	Pass	
Endrin ketone	S24-Ap0073090	NCP	%	72			70-130	Pass	
g-HCH (Lindane)	S24-Ap0073090	NCP	%	79			70-130	Pass	
Heptachlor	S24-My0014976	NCP	%	93			70-130	Pass	
Heptachlor epoxide	S24-My0014976	NCP	%	98			70-130	Pass	
Hexachlorobenzene	S24-Ap0073090	NCP	%	73			70-130	Pass	
Methoxychlor	S24-My0014976	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Dimethoate	S24-Ap0073090	NCP	%	74			70-130	Pass	
Ethion	S24-My0014976	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S24-My0001856	NCP	%	74			70-130	Pass	
Aroclor-1260	S24-My0001856	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S24-My0001856	NCP	%	90			30-130	Pass	
2.4-Dichlorophenol	S24-My0001856	NCP	%	96			30-130	Pass	
2.4.5-Trichlorophenol	S24-My0001856	NCP	%	108			30-130	Pass	
2.4.6-Trichlorophenol	S24-My0001856	NCP	%	88			30-130	Pass	
2.6-Dichlorophenol	S24-My0001856	NCP	%	98			30-130	Pass	
4-Chloro-3-methylphenol	S24-My0001856	NCP	%	96			30-130	Pass	
Tetrachlorophenols - Total	S24-My0001856	NCP	%	88			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S24-My0001856	NCP	%	96			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S24-My0001856	NCP	%	78			30-130	Pass	
2-Nitrophenol	S24-My0001856	NCP	%	104			30-130	Pass	
2.4-Dimethylphenol	S24-My0001856	NCP	%	90			30-130	Pass	
2-Methylphenol (o-Cresol)	S24-My0001856	NCP	%	107			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-My0001856	NCP	%	95			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Nitrophenol	S24-My0001856	NCP	%	78			30-130	Pass	
Dinoseb	S24-My0001856	NCP	%	89			30-130	Pass	
Phenol	S24-My0001856	NCP	%	106			30-130	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0071426	CP	%	150			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0071426	CP	%	96			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0071426	CP	%	104			50-150	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0071426	CP	%	111			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	N24-Ap0071431	CP	%	84			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	N24-Ap0071431	CP	%	76			70-130	Pass	
Toluene	N24-Ap0071431	CP	%	85			70-130	Pass	
Ethylbenzene	N24-Ap0071431	CP	%	90			70-130	Pass	
m&p-Xylenes	N24-Ap0071431	CP	%	92			70-130	Pass	
o-Xylene	N24-Ap0071431	CP	%	87			70-130	Pass	
Xylenes - Total*	N24-Ap0071431	CP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	N24-Ap0071431	CP	%	81			70-130	Pass	
TRH C6-C10	N24-Ap0071431	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N24-Ap0071432	CP	%	86			75-125	Pass	
Cadmium	N24-Ap0071432	CP	%	89			75-125	Pass	
Chromium	N24-Ap0071432	CP	%	87			75-125	Pass	
Copper	N24-Ap0071432	CP	%	81			75-125	Pass	
Lead	N24-Ap0071432	CP	%	101			75-125	Pass	
Mercury	N24-Ap0071432	CP	%	94			75-125	Pass	
Nickel	N24-Ap0071432	CP	%	88			75-125	Pass	
Zinc	N24-Ap0071432	CP	%	94			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	N24-Ap0071432	CP	%	88			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
Pentachlorophenol	W24-My0017341	NCP	%	90			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2.4-Dinitrophenol	S24-My0001844	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	N24-Ap0071432	CP	%	80			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	N24-Ap0071433	CP	%	96			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	N24-Ap0071433	CP	%	95			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	N24-Ap0071433	CP	%	108			70-130	Pass	
Ethylbenzene	N24-Ap0071433	CP	%	104			70-130	Pass	
m&p-Xylenes	N24-Ap0071433	CP	%	107			70-130	Pass	
o-Xylene	N24-Ap0071433	CP	%	116			70-130	Pass	
Xylenes - Total*	N24-Ap0071433	CP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	N24-Ap0071433	CP	%	88			70-130	Pass	
TRH C6-C10	N24-Ap0071433	CP	%	92			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	N24-Ap0071446	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	N24-Ap0071446	CP	%	91			70-130	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0071449	CP	%	115			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0071449	CP	%	88			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0071449	CP	%	111			50-150	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0071449	CP	%	139			50-150	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N24-Ap0071459	CP	%	94			75-125	Pass	
Cadmium	N24-Ap0071459	CP	%	94			75-125	Pass	
Chromium	N24-Ap0071459	CP	%	88			75-125	Pass	
Copper	N24-Ap0071459	CP	%	89			75-125	Pass	
Lead	N24-Ap0071459	CP	%	85			75-125	Pass	
Mercury	N24-Ap0071459	CP	%	94			75-125	Pass	
Nickel	N24-Ap0071459	CP	%	87			75-125	Pass	
Zinc	N24-Ap0071459	CP	%	87			75-125	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	N24-Ap0071489	CP	%	111			70-130	Pass	
Fenitrothion	N24-Ap0071489	CP	%	93			70-130	Pass	
Methyl parathion	N24-Ap0071489	CP	%	87			70-130	Pass	
Mevinphos	N24-Ap0071489	CP	%	104			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ap0071407	CP	%	17	16	5.5	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071412	CP	mg/kg	14	5.2	92	30%	Fail	Q15
Cadmium	N24-Ap0071412	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Ap0071412	CP	mg/kg	36	12	98	30%	Fail	Q15
Copper	N24-Ap0071412	CP	mg/kg	10	12	15	30%	Pass	
Lead	N24-Ap0071412	CP	mg/kg	150	130	10	30%	Pass	
Mercury	N24-Ap0071412	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071412	CP	mg/kg	6.1	7.1	15	30%	Pass	
Zinc	N24-Ap0071412	CP	mg/kg	150	150	3.1	30%	Pass	

Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ap0071417	CP	%	21	25	15	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Iron	S24-My0030778	NCP	mg/kg	46000	34000	29	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25 °C as rec.)	N24-Ap0071421	CP	uS/cm	23	25	7.4	30%	Pass	
Total Organic Carbon*	S24-My0013616	NCP	%	0.3	0.3	10	30%	Pass	
Duplicate									
Cation Exchange Capacity				Result 1	Result 2	RPD			
Cation Exchange Capacity	S24-My0000748	NCP	meq/100g	21	19	7.3	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071422	CP	mg/kg	7.2	9.3	24	30%	Pass	
Chromium	N24-Ap0071422	CP	mg/kg	12	14	9.7	30%	Pass	
Copper	N24-Ap0071422	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	N24-Ap0071422	CP	mg/kg	7.1	7.4	4.5	30%	Pass	
Mercury	N24-Ap0071422	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071422	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Ap0071422	CP	mg/kg	< 5	5.5	11	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0071425	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0071425	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0071425	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0071425	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N24-Ap0071428	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N24-Ap0071428	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N24-Ap0071428	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N24-Ap0071428	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N24-Ap0071428	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N24-Ap0071428	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N24-Ap0071428	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0071428	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N24-Ap0071428	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N24-Ap0071430	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N24-Ap0071430	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N24-Ap0071430	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N24-Ap0071430	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N24-Ap0071430	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N24-Ap0071430	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N24-Ap0071430	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0071430	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N24-Ap0071430	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071433	CP	mg/kg	3.8	4.6	20	30%	Pass	
Cadmium	N24-Ap0071433	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Ap0071433	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	N24-Ap0071433	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	N24-Ap0071433	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	N24-Ap0071433	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071433	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Ap0071433	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	N24-Ap0071434	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N24-Ap0071434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N24-Ap0071434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0071434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N24-Ap0071434	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N24-Ap0071434	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0071434	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0071434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0071434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0071434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ap0071438	CP	%	8.8	9.5	8.2	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N24-Ap0071439	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N24-Ap0071439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N24-Ap0071439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N24-Ap0071439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N24-Ap0071439	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N24-Ap0071439	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N24-Ap0071439	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0071439	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N24-Ap0071439	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N24-Ap0071440	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	N24-Ap0071440	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N24-Ap0071440	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N24-Ap0071440	CP	mg/kg	62	< 50	35	30%	Fail	Q15

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N24-Ap0071440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N24-Ap0071440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N24-Ap0071440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N24-Ap0071440	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N24-Ap0071440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N24-Ap0071440	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0071440	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N24-Ap0071440	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0071440	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N24-Ap0071440	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N24-Ap0071440	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071442	CP	mg/kg	16	19	21	30%	Pass	
Cadmium	N24-Ap0071442	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Ap0071442	CP	mg/kg	19	20	6.4	30%	Pass	
Copper	N24-Ap0071442	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	N24-Ap0071442	CP	mg/kg	7.5	8.5	12	30%	Pass	
Mercury	N24-Ap0071442	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071442	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Ap0071442	CP	mg/kg	8.9	14	43	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071443	CP	mg/kg	4.5	5.2	16	30%	Pass	
Cadmium	N24-Ap0071443	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Ap0071443	CP	mg/kg	7.8	8.6	9.1	30%	Pass	
Copper	N24-Ap0071443	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	N24-Ap0071443	CP	mg/kg	16	17	5.4	30%	Pass	
Mercury	N24-Ap0071443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071443	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Ap0071443	CP	mg/kg	21	20	5.7	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25 °C as rec.)	N24-Ap0071444	CP	uS/cm	20	20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	N24-Ap0071449	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N24-Ap0071449	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N24-Ap0071449	CP	mg/kg	63	70	11	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Chrysene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	N24-Ap0071449	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	N24-Ap0071449	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	N24-Ap0071449	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	N24-Ap0071449	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	N24-Ap0071449	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	N24-Ap0071449	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	N24-Ap0071449	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	N24-Ap0071449	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	N24-Ap0071449	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	N24-Ap0071449	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4-Nitrophenol	N24-Ap0071449	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	N24-Ap0071449	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	N24-Ap0071449	CP	mg/kg	1.9	1.9	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0071449	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N24-Ap0071449	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N24-Ap0071449	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ap0071450	CP	%	19	19	2.2	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N24-Ap0071452	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N24-Ap0071452	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N24-Ap0071452	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N24-Ap0071452	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N24-Ap0071452	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N24-Ap0071452	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N24-Ap0071452	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0071452	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N24-Ap0071452	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0071452	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0071452	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0071452	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0071452	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071456	CP	mg/kg	7.0	7.3	5.0	30%	Pass	
Cadmium	N24-Ap0071456	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Ap0071456	CP	mg/kg	9.0	10	16	30%	Pass	
Copper	N24-Ap0071456	CP	mg/kg	8.2	7.1	14	30%	Pass	
Mercury	N24-Ap0071456	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Ap0071456	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Ap0071456	CP	mg/kg	110	100	4.4	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	N24-Ap0071462	CP	%	18	20	9.3	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Ursula Long	Analytical Services Manager
Bennel Jiri	Senior Analyst-Asbestos
Fang Yee Tan	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Metal
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-PFAS
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile
Ryan Phillips	Senior Analyst-Inorganic



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Accreditation Number 1261
Site Number 18217

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Attention: **Callum Laker**

Report **1091634-W**
Project name Gilleston Heights
Project ID 304100928
Received Date Apr 29, 2024

Client Sample ID			**RIN22/4/24**	**RIN23/4/24**	**RIN24/4/24**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**N24-Ap0071465**	**N24-Ap0071466**	**N24-Ap0071467**
Date Sampled			**Apr 22, 2024**	**Apr 23, 2024**	**Apr 24, 2024**
Test/Reference	LOR	Unit			
Heavy Metals					
Arsenic	0.001	mg/L	-	< 0.001	< 0.001
Cadmium	0.0002	mg/L	-	< 0.0002	< 0.0002
Chromium	0.001	mg/L	-	< 0.001	< 0.001
Copper	0.001	mg/L	-	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	-	< 0.0001	< 0.0001
Nickel	0.001	mg/L	-	< 0.001	< 0.001
Zinc	0.005	mg/L	-	< 0.005	< 0.005
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	-	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	< 0.1	< 0.1
BTEX					
Benzene	0.001	mg/L	-	< 0.001	< 0.001
Toluene	0.001	mg/L	-	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	-	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	-	< 0.002	< 0.002
o-Xylene	0.001	mg/L	-	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	-	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	-	88	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	-	< 0.01	< 0.01
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	< 0.05	< 0.05
TRH C6-C10	0.02	mg/L	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	-	< 0.02	< 0.02
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	-	< 0.001	< 0.001
Anthracene	0.001	mg/L	-	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	-	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	< 0.001	< 0.001

Client Sample ID			RIN22/4/24	RIN23/4/24	RIN24/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0071465	N24-Ap0071466	N24-Ap0071467
Date Sampled			Apr 22, 2024	Apr 23, 2024	Apr 24, 2024
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(g.h.i)perylene	0.001	mg/L	-	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	< 0.001	< 0.001
Chrysene	0.001	mg/L	-	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	-	< 0.001	< 0.001
Fluorene	0.001	mg/L	-	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	< 0.001	< 0.001
Naphthalene	0.001	mg/L	-	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	-	< 0.001	< 0.001
Pyrene	0.001	mg/L	-	< 0.001	< 0.001
Total PAH*	0.001	mg/L	-	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	50	53
p-Terphenyl-d14 (surr.)	1	%	-	93	82
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	< 0.002	< 0.002
4.4'-DDD	0.0002	mg/L	-	< 0.0002	< 0.0002
4.4'-DDE	0.0002	mg/L	-	< 0.0002	< 0.0002
4.4'-DDT	0.0002	mg/L	-	< 0.0002	< 0.0002
a-HCH	0.0002	mg/L	-	< 0.0002	< 0.0002
Aldrin	0.0002	mg/L	-	< 0.0002	< 0.0002
b-HCH	0.0002	mg/L	-	< 0.0002	< 0.0002
d-HCH	0.0002	mg/L	-	< 0.0002	< 0.0002
Dieldrin	0.0002	mg/L	-	< 0.0002	< 0.0002
Endosulfan I	0.0002	mg/L	-	< 0.0002	< 0.0002
Endosulfan II	0.0002	mg/L	-	< 0.0002	< 0.0002
Endosulfan sulphate	0.0002	mg/L	-	< 0.0002	< 0.0002
Endrin	0.0002	mg/L	-	< 0.0002	< 0.0002
Endrin aldehyde	0.0002	mg/L	-	< 0.0002	< 0.0002
Endrin ketone	0.0002	mg/L	-	< 0.0002	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	-	< 0.0002	< 0.0002
Heptachlor	0.0002	mg/L	-	< 0.0002	< 0.0002
Heptachlor epoxide	0.0002	mg/L	-	< 0.0002	< 0.0002
Hexachlorobenzene	0.0002	mg/L	-	< 0.0002	< 0.0002
Methoxychlor	0.0002	mg/L	-	< 0.0002	< 0.0002
Toxaphene	0.005	mg/L	-	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	< 0.0002	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	< 0.0002	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	< 0.002	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	< 0.002	< 0.002
Dibutylchlorendate (surr.)	1	%	-	98	85
Tetrachloro-m-xylene (surr.)	1	%	-	86	84
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	< 0.002	< 0.002
Bolstar	0.002	mg/L	-	< 0.002	< 0.002
Chlorfenvinphos	0.02	mg/L	-	< 0.02	< 0.02
Chlorpyrifos	0.002	mg/L	-	< 0.002	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	-	< 0.002	< 0.002
Coumaphos	0.02	mg/L	-	< 0.02	< 0.02
Demeton-S	0.002	mg/L	-	< 0.002	< 0.002

Client Sample ID			RIN22/4/24	RIN23/4/24	RIN24/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0071465	N24-Ap0071466	N24-Ap0071467
Date Sampled			Apr 22, 2024	Apr 23, 2024	Apr 24, 2024
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Demeton-O	0.002	mg/L	-	< 0.002	< 0.002
Diazinon	0.002	mg/L	-	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	-	< 0.002	< 0.002
Dimethoate	0.002	mg/L	-	< 0.002	< 0.002
Disulfoton	0.002	mg/L	-	< 0.002	< 0.002
EPN	0.002	mg/L	-	< 0.002	< 0.002
Ethion	0.002	mg/L	-	< 0.002	< 0.002
Ethoprop	0.002	mg/L	-	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	-	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	-	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	-	< 0.002	< 0.002
Fenthion	0.002	mg/L	-	< 0.002	< 0.002
Malathion	0.002	mg/L	-	< 0.002	< 0.002
Merphos	0.002	mg/L	-	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	-	< 0.002	< 0.002
Mevinphos	0.002	mg/L	-	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	-	< 0.002	< 0.002
Naled	0.002	mg/L	-	< 0.002	< 0.002
Omethoate	0.02	mg/L	-	< 0.02	< 0.02
Phorate	0.002	mg/L	-	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	-	< 0.002	< 0.002
Ronnel	0.002	mg/L	-	< 0.002	< 0.002
Terbufos	0.002	mg/L	-	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	< 0.002	< 0.002
Tokuthion	0.002	mg/L	-	< 0.002	< 0.002
Trichloronate	0.002	mg/L	-	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	-	134	106
Polychlorinated Biphenyls					
Aroclor-1016	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1221	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1232	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1242	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1248	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1254	0.005	mg/L	-	< 0.005	< 0.005
Aroclor-1260	0.005	mg/L	-	< 0.005	< 0.005
Total PCB*	0.005	mg/L	-	< 0.005	< 0.005
Dibutylchlorendate (surr.)	1	%	-	98	85
Tetrachloro-m-xylene (surr.)	1	%	-	86	84
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	-	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	-	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	< 0.01	< 0.01

Client Sample ID			RIN22/4/24	RIN23/4/24	RIN24/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0071465	N24-Ap0071466	N24-Ap0071467
Date Sampled			Apr 22, 2024	Apr 23, 2024	Apr 24, 2024
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	< 0.03	< 0.03
2-Nitrophenol	0.01	mg/L	-	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	< 0.003	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	< 0.006	< 0.006
Total cresols*	0.01	mg/L	-	< 0.01	< 0.01
4-Nitrophenol	0.03	mg/L	-	< 0.03	< 0.03
Dinoseb	0.1	mg/L	-	< 0.1	< 0.1
Phenol	0.003	mg/L	-	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	-	37	34
Total Non-Halogenated Phenol*	0.1	mg/L	-	< 0.1	< 0.1
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16	0.05	mg/L	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	-	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	< 0.1	< 0.1
Per- and Polyfluoroalkyl Substances (PFASs) - Short					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.05	ug/L	-	< 0.05	< 0.05
13C2-6:2 FTSA (surr.)	1	%	-	89	95
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	< 0.01	< 0.01
18O2-PFHxS (surr.)	1	%	-	109	95
13C8-PFOS (surr.)	1	%	-	116	86
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	< 0.01	< 0.01
13C8-PFOA (surr.)	1	%	-	112	97
Sum (PFHxS + PFOS)*	0.01	ug/L	-	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	< 0.01	< 0.01

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Metals M8	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Heavy Metals	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
BTEX	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			

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Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Stantec Australia Pty Ltd (NSW/ACT)
Address: Level 9, The Forum, 203 Pacific Highway
St Leonards
NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X						
Sydney Laboratory - NATA # 1261 Site # 18217	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794									X						
External Laboratory															

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID													
1	AHA101 0-0.1	Apr 22, 2024		Soil	N24-Ap0071403					X			X					
2	AHA102 0-0.01	Apr 22, 2024		Soil	N24-Ap0071404					X			X					
3	AHA103 0-0.1	Apr 22, 2024		Soil	N24-Ap0071405					X			X					
4	AHA103 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071406					X			X					
5	AHA104 0-0.1	Apr 22, 2024		Soil	N24-Ap0071407					X			X					
6	AHA105 0-0.1	Apr 22, 2024		Soil	N24-Ap0071408					X			X					
7	AHA105 0.2-0.25	Apr 22, 2024		Soil	N24-Ap0071409					X			X					
8	AHA106 0-0.1	Apr 22, 2024		Soil	N24-Ap0071410					X			X					
9	AHA107 0-0.1	Apr 22, 2024		Soil	N24-Ap0071411					X			X					

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Eurofins Analytical Services Manager : Ursula Long

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
10	DUP1	Apr 22, 2024		Soil	N24-Ap0071412					X			X							
11	AHA108 0.02-0.1	Apr 22, 2024		Soil	N24-Ap0071413					X			X							
12	AHA109 0-0.1	Apr 22, 2024		Soil	N24-Ap0071414					X			X							
13	AHA110 0-0.1	Apr 22, 2024		Soil	N24-Ap0071415					X			X							
14	AHA111 0-0.1	Apr 22, 2024		Soil	N24-Ap0071416					X			X							
15	DUP4	Apr 22, 2024		Soil	N24-Ap0071417					X			X							
16	AHA112 0-0.1	Apr 22, 2024		Soil	N24-Ap0071418					X			X							
17	AHA113 0-0.1	Apr 22, 2024		Soil	N24-Ap0071419					X			X							
18	AHA113 0.1-0.2	Apr 22, 2024		Soil	N24-Ap0071420					X			X							
19	TP1 0-0.1	Apr 23, 2024		Soil	N24-Ap0071421						X	X	X	X			X			
20	TP1 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071422								X		X					
21	TP2 0-0.1	Apr 23, 2024		Soil	N24-Ap0071423		X					X	X				X		X	

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NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
22	TP2 0.2-0.3	Apr 23, 2024		Soil	N24-Ap0071424								X		X					
23	TP3 0-0.1	Apr 23, 2024		Soil	N24-Ap0071425		X					X	X				X		X	
24	TP4 0-0.1	Apr 23, 2024		Soil	N24-Ap0071426		X					X	X				X		X	
25	TP4 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071427								X		X					
26	TP5 0-0.1	Apr 23, 2024		Soil	N24-Ap0071428		X					X	X				X		X	
27	TP5 0.9-1	Apr 23, 2024		Soil	N24-Ap0071429				X											
28	TP5 1.4-1.5	Apr 23, 2024		Soil	N24-Ap0071430								X		X					
29	TP5 2.2-2.3	Apr 23, 2024		Soil	N24-Ap0071431								X		X					
30	TP6 0-0.1	Apr 23, 2024		Soil	N24-Ap0071432		X					X	X				X		X	
31	TP6 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071433								X		X					
32	TP7 0-0.1	Apr 23, 2024		Soil	N24-Ap0071434		X					X	X				X		X	
33	TP8 0-0.1	Apr 23, 2024		Soil	N24-Ap0071435		X					X	X				X		X	
34	TP8 0.9-1	Apr 23, 2024		Soil	N24-Ap0071436								X		X					
35	TP10 0-0.1	Apr 23, 2024		Soil	N24-Ap0071437		X					X	X				X		X	

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
36	TP10 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071438								X		X					
37	TP10 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071439								X		X					
38	TP11 0-0.1	Apr 23, 2024		Soil	N24-Ap0071440		X					X	X				X			
39	TP12 0-0.1	Apr 23, 2024		Soil	N24-Ap0071441		X					X	X				X		X	
40	TP12 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071442								X		X					
41	TP13 0-0.1	Apr 23, 2024		Soil	N24-Ap0071443		X					X	X				X			
42	TP13 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071444						X		X	X	X					
43	TP14 0-0.1	Apr 23, 2024		Soil	N24-Ap0071445		X					X	X				X		X	
44	TP15 0-0.1	Apr 23, 2024		Soil	N24-Ap0071446		X					X	X				X		X	
45	TP16 0-0.1	Apr 23, 2024		Soil	N24-Ap0071447		X					X	X				X		X	
46	TP16 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071448			X												
47	TP17 0-0.1	Apr 24, 2024		Soil	N24-Ap0071449		X					X	X				X		X	
48	TP17 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071450								X		X					
49	TP17 1-1.1	Apr 24, 2024		Soil	N24-Ap0071451								X			X				

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
50	TP18 0-0.1	Apr 24, 2024		Soil	N24-Ap0071452		X					X	X				X		X	
51	TP18 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071453								X		X					
52	TP19 0-0.1	Apr 24, 2024		Soil	N24-Ap0071454		X					X	X				X		X	
53	DUP2	Apr 24, 2024		Soil	N24-Ap0071455							X	X				X			
54	TP19 0.3-0.4	Apr 24, 2024		Soil	N24-Ap0071456	X							X		X					
55	TP19 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071457		X						X		X					
56	TP19 0.8-0.9	Apr 24, 2024		Soil	N24-Ap0071458		X													
57	TP20 0-0.1	Apr 24, 2024		Soil	N24-Ap0071459		X					X	X				X		X	
58	TP20 0.4-0.5	Apr 24, 2024		Soil	N24-Ap0071460		X													
59	TP21 0-0.1	Apr 24, 2024		Soil	N24-Ap0071461		X					X	X				X		X	
60	TP/HA22 0-0.1	Apr 24, 2024		Soil	N24-Ap0071462		X						X		X					
61	DUP3	Apr 24, 2024		Soil	N24-Ap0071463								X		X					
62	TP/HA22 0.2-0.3	Apr 24, 2024		Soil	N24-Ap0071464								X		X					

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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NSW 2065

Project Name: Gilleston Heights
Project ID: 304100928

Order No.: 304100928
Report #: 1091634
Phone: (02) 9493 9700
Fax:

Received: Apr 29, 2024 10:54 AM
Due: May 6, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Lead	Total Organic Carbon*	Eurofins Suite B15	Moisture Set	NEPM Screen for Soil Classification	Eurofins Suite B7	Eurofins Suite B4	Eurofins Suite B7A	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs) - Short	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
63	RIN22/4/24	Apr 22, 2024		Water	N24-Ap0071465					X										
64	RIN23/4/24	Apr 23, 2024		Water	N24-Ap0071466							X					X		X	
65	RIN24/4/24	Apr 24, 2024		Water	N24-Ap0071467							X					X		X	
66	AHA101 0.2-0.3	Apr 22, 2024		Soil	N24-Ap0071468				X											
67	AHA102 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071469				X											
68	AHA104 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071470				X											
69	AHA106 0.3-0.35	Apr 22, 2024		Soil	N24-Ap0071471				X											
70	AHA107 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071472				X											
71	AHA108 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071473				X											
72	AHA109 0.35-	Apr 22, 2024		Soil	N24-Ap0071474				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
72	AHA109 0.35-0.4	Apr 22, 2024		Soil	N24-Ap0071474															
73	AHA110 0.25-0.3	Apr 22, 2024		Soil	N24-Ap0071475				X											
74	AHA111 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071476				X											
75	AHA112 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071477			X												
76	TP1 0.3-0.4	Apr 23, 2024		Soil	N24-Ap0071478				X											
77	TP2 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071479				X											
78	TP3 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071480				X											
79	TP3 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071481				X											
80	TP4 1-1.1	Apr 23, 2024		Soil	N24-Ap0071482				X											
81	TP5 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071483		X						X		X					
82	TP5 1.8-1.9	Apr 23, 2024		Soil	N24-Ap0071484				X											

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
83	TP6 1-1.1	Apr 23, 2024		Soil	N24-Ap0071485				X											
84	TP7 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071486				X											
85	TP7 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071487				X											
86	TP8 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071488				X											
87	TP9 0-0.1	Apr 23, 2024		Soil	N24-Ap0071489		X					X	X				X		X	
88	TP9 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071490				X											
89	TP9 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071491				X											
90	TP11 0.4-0.5	Apr 23, 2024		Soil	N24-Ap0071492				X											
91	TP11 0.7-0.8	Apr 23, 2024		Soil	N24-Ap0071493				X											
92	TP12 0.65-0.75	Apr 23, 2024		Soil	N24-Ap0071494				X											
93	TP13 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071495				X											
94	TP14 0.5-0.6	Apr 23, 2024		Soil	N24-Ap0071496				X											
95	TP14 1-1.1	Apr 23, 2024		Soil	N24-Ap0071497				X											

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
96	TP15 0.6-0.7	Apr 23, 2024		Soil	N24-Ap0071498				X											
97	TP15 1.1-1.2	Apr 23, 2024		Soil	N24-Ap0071499				X											
98	TP16 0.9-1.0	Apr 23, 2024		Soil	N24-Ap0071500				X											
99	TP18 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071501				X											
100	TP19 1.2-1.3	Apr 24, 2024		Soil	N24-Ap0071502				X											
101	TP20 0.7-0.8	Apr 24, 2024		Soil	N24-Ap0071503				X											
102	TP21 0.5-0.6	Apr 24, 2024		Soil	N24-Ap0071504				X											
103	TP21 1-1.1	Apr 24, 2024		Soil	N24-Ap0071505				X											
104	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071506															X
105	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071508													X		
106	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071509															X
107	TB	Apr 22, 2024		Trip Blank	N24-Ap0071511													X		

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Melbourne Laboratory - NATA # 1261 Site # 1254														X						
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794														X						
				(solid)																
108	TS	Apr 22, 2024		Trip Spike (solid)	N24-Ap0071512															X
109	TB	Apr 22, 2024		Trip Blank (solid)	N24-Ap0071514													X		
110	DUP 1	Apr 22, 2024		Water	N24-Ap0071908				X											
111	SW1	Apr 22, 2024		Water	N24-Ap0071909				X											
112	AHA13 0.15-0.2	Apr 22, 2024		Soil	N24-Ap0071953				X											
113	SED1	Apr 22, 2024		Soil	N24-Ap0071954				X											
114	TP10 0.5-0.6	Apr 22, 2024		Soil	N24-Ap0071955				X											
115	TP4 0.8-0.9	Apr 22, 2024		Soil	N24-Ap0071956				X											
116	TP16 0.4-0.5	Apr 22, 2024		Soil	N24-Ap0071976				X											
Test Counts						1	25	2	43	21	2	24	60	2	19	1	24	3	20	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
Sum of US EPA PFAS (PFOS + PFOA)*	ug/L	-			0.01	N/A	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	87			80-120	Pass	
Chromium	%	87			80-120	Pass	
Copper	%	87			80-120	Pass	
Lead	%	88			80-120	Pass	
Mercury	%	84			80-120	Pass	
Nickel	%	87			80-120	Pass	
Zinc	%	88			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	104			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
o-Xylene	%	106			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	96			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	70			25-140	Pass	
2.4-Dichlorophenol	%	72			25-140	Pass	
2.4.5-Trichlorophenol	%	75			25-140	Pass	
2.4.6-Trichlorophenol	%	83			25-140	Pass	
2.6-Dichlorophenol	%	94			25-140	Pass	
4-Chloro-3-methylphenol	%	82			25-140	Pass	
Pentachlorophenol	%	93			25-140	Pass	
Tetrachlorophenols - Total	%	96			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Cyclohexyl-4.6-dinitrophenol	%	99			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	94			25-140	Pass	
2-Nitrophenol	%	85			25-140	Pass	
2.4-Dimethylphenol	%	78			25-140	Pass	
2.4-Dinitrophenol	%	85			25-140	Pass	
2-Methylphenol (o-Cresol)	%	74			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	74			25-140	Pass	
4-Nitrophenol	%	37			25-140	Pass	
Dinoseb	%	99			25-140	Pass	
Phenol	%	46			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	79			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	128			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	124			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	N24-Ap0071467	CP	%	106			70-130	Pass	
4.4'-DDD	N24-Ap0071467	CP	%	95			70-130	Pass	
4.4'-DDE	N24-Ap0071467	CP	%	105			70-130	Pass	
a-HCH	N24-Ap0071467	CP	%	95			70-130	Pass	
Aldrin	N24-Ap0071467	CP	%	103			70-130	Pass	
b-HCH	N24-Ap0071467	CP	%	98			70-130	Pass	
d-HCH	N24-Ap0071467	CP	%	104			70-130	Pass	
Dieldrin	N24-Ap0071467	CP	%	106			70-130	Pass	
Endosulfan I	N24-Ap0071467	CP	%	103			70-130	Pass	
Endosulfan II	N24-Ap0071467	CP	%	103			70-130	Pass	
Endosulfan sulphate	N24-Ap0071467	CP	%	126			70-130	Pass	
Endrin ketone	N24-Ap0071467	CP	%	114			70-130	Pass	
g-HCH (Lindane)	N24-Ap0071467	CP	%	110			70-130	Pass	
Heptachlor	N24-Ap0071467	CP	%	106			70-130	Pass	
Heptachlor epoxide	N24-Ap0071467	CP	%	102			70-130	Pass	
Hexachlorobenzene	N24-Ap0071467	CP	%	99			70-130	Pass	
Methoxychlor	N24-Ap0071467	CP	%	97			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	N24-Ap0071467	CP	%	120			70-130	Pass	
Dimethoate	N24-Ap0071467	CP	%	84			70-130	Pass	
Ethion	N24-Ap0071467	CP	%	94			70-130	Pass	
Methyl parathion	N24-Ap0071467	CP	%	81			70-130	Pass	
Mevinphos	N24-Ap0071467	CP	%	92			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	N24-Ap0071467	CP	%	98			70-130	Pass	
Aroclor-1260	N24-Ap0071467	CP	%	89			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071465	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	N24-Ap0071465	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	N24-Ap0071465	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	N24-Ap0071465	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	N24-Ap0071465	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	N24-Ap0071465	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	N24-Ap0071466	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	N24-Ap0071466	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	N24-Ap0071466	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
4.4'-DDD	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDE	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
4.4'-DDT	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
a-HCH	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Aldrin	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
b-HCH	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
d-HCH	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Dieldrin	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan I	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan II	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endosulfan sulphate	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Endrin aldehyde	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin ketone	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
g-HCH (Lindane)	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Heptachlor epoxide	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Hexachlorobenzene	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Methoxychlor	N24-Ap0071466	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Toxaphene	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	N24-Ap0071466	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos-methyl	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	N24-Ap0071466	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Demeton-O	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	N24-Ap0071466	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Phorate	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	N24-Ap0071466	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	N24-Ap0071466	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1221	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1232	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1242	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1248	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1254	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1260	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Total PCB*	N24-Ap0071466	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	N24-Ap0071466	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	N24-Ap0071466	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	N24-Ap0071466	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	N24-Ap0071466	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	N24-Ap0071466	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	N24-Ap0071466	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	N24-Ap0071466	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	N24-Ap0071466	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	N24-Ap0071466	CP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	N24-Ap0071466	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	N24-Ap0071466	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0071466	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	N24-Ap0071466	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Ap0071467	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	N24-Ap0071467	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	N24-Ap0071467	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	N24-Ap0071467	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	N24-Ap0071467	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	N24-Ap0071467	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	N24-Ap0071467	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.

Authorised by:

Ursula Long	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-PFAS
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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#1092003

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Irem Haskara**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com ; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N
Sample Temperature on Arrival: 15.7°

Notes: 2 metals bottles provided for water samples - Please filter one sample and conduct metal analsyis for Total and Dissolved

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	(Cr6)	Phenols - Speciated	PCB	SVOC	PFAS Short Suite - Std LOR	TRH - TRACE LEVEL	PAH - TRACE LEVEL	OCP - TRACE LEVEL	OPP - TRACE LEVEL	PFAS - TRACE LEVEL	METALS - TRACE LEVEL	PCB - TRACE LEVEL	Applicable Suites	Sample Comments
	SW1	4/29/2024	Water	GV, GB, PB			1							1						1		1	1	1	1	1		STD 8 METALS
	DUP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
	TRIP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		SEND TO SGS FOR ANALYSIS
	SED1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	STD 8 METALS
	SED DUP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	STD 8 METALS
	SED TRIP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	SEND TO SGS FOR ANALYSIS
	RIN29/4/24	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
				Total	3		7	3	3	3	3			3		3	3		3	4		4	4					

Relinquished By: Brock Collinson
Company:
Time:
Date:

Received By: JRandall
Company:
Time: 30/4
Date: 2023

Relinquished By:
Company:
Time:
Date:

Received By:
Company:
Time:
Date:

Stantec Australia Pty Ltd
Level 22, 570 Bourke Street
Melbourne
VIC 3000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Callum Laker**

Report **1092003-S**
Project name Gilleston Heights
Project ID 304100928
Received Date Apr 30, 2024

Client Sample ID			**SED1**	**SED DUP1**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**N24-Ap0075268**	**N24-Ap0075269**
Date Sampled			**Apr 29, 2024**	**Apr 29, 2024**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	INT	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			SED1	SED DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			N24-Ap0075268	N24-Ap0075269
Date Sampled			Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	104	110
p-Terphenyl-d14 (surr.)	1	%	112	126
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	109	118
Tetrachloro-m-xylene (surr.)	1	%	106	114
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2

Client Sample ID			SED1	SED DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			N24-Ap0075268	N24-Ap0075269
Date Sampled			Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	120
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	109	118
Tetrachloro-m-xylene (surr.)	1	%	106	114
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5
2-Nitrophenol	1	mg/kg	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2

Client Sample ID			SED1	SED DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			N24-Ap0075268	N24-Ap0075269
Date Sampled			Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit		
Phenols (non-Halogenated)				
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	71	80
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Heavy Metals				
Arsenic	2	mg/kg	2.2	2.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	6.7	5.5
Copper	5	mg/kg	< 5	< 5
Lead	5	mg/kg	6.3	6.0
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5
Zinc	5	mg/kg	< 5	< 5
Sample Properties				
% Moisture	1	%	25	17
Per- and Polyfluoroalkyl Substances (PFASs) - Short				
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10
13C2-6:2 FTSA (surr.)	1	%	93	56
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5
18O2-PFHxS (surr.)	1	%	88	91
13C8-PFOS (surr.)	1	%	99	85
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5
13C8-PFOA (surr.)	1	%	91	88
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Apr 30, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs) - Short	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins

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Eurofins Environment Testing Australia Pty Ltd
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Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Company Name: Stantec Australia Pty Ltd (Newcastle)
Address: Level 22, 570 Bourke Street
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Project Name: Gilleston Heights
Project ID: 304100928

Order No.:
Report #: 1092003
Phone: (02) 9493 9700
Fax:

Received: Apr 30, 2024 8:00 AM
Due: May 7, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Irem Haskara

Sample Detail						Arsenic (low-level)	Mercury (low-level)	Metals M8	Metals M8 filtered	Eurofins Suite B15	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short	Organophosphorus Pesticides (Trace level)	Polychlorinated Biphenyls (PCB trace level)	Organochlorine Pesticides (Trace level)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254							X			X						X	X	X	
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X	X		X
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	SW1	Apr 29, 2024		Water	N24-Ap0075201	X	X	X			X		X			X	X	X	X
2	DUP1-W	Apr 29, 2024		Water	N24-Ap0075267	X	X	X			X		X			X	X	X	X
3	SED1	Apr 29, 2024		Soil	N24-Ap0075268					X		X		X	X				
4	SED DUP1	Apr 29, 2024		Soil	N24-Ap0075269					X		X		X	X				
5	RIN29/4/24	Apr 29, 2024		Water	N24-Ap0075270	X	X	X	X		X		X			X	X	X	X
Test Counts						3	3	3	1	2	3	2	3	2	2	3	3	3	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Phenols (non-Halogenated)							
Total Non-Halogenated Phenol*	mg/kg	-			20	N/A	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	93			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	106			70-130	Pass	
Toluene	%	102			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	%	105			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	107			70-130	Pass	
Xylenes - Total*	%	108			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	98			70-130	Pass	
TRH C6-C10	%	94			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	97			70-130	Pass	
Anthracene	%	102			70-130	Pass	
Benz(a)anthracene	%	90			70-130	Pass	
Benzo(a)pyrene	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g.h.i)perylene	%	96			70-130	Pass	
Benzo(k)fluoranthene	%	98			70-130	Pass	
Chrysene	%	105			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	106			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	95			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
Phenanthrene	%	95			70-130	Pass	
Pyrene	%	105			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	110			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	114			70-130	Pass	
4.4'-DDT	%	113			70-130	Pass	
a-HCH	%	103			70-130	Pass	
Aldrin	%	109			70-130	Pass	
b-HCH	%	107			70-130	Pass	
d-HCH	%	108			70-130	Pass	
Dieldrin	%	111			70-130	Pass	
Endosulfan I	%	108			70-130	Pass	
Endosulfan II	%	105			70-130	Pass	
Endosulfan sulphate	%	103			70-130	Pass	
Endrin	%	123			70-130	Pass	
Endrin aldehyde	%	104			70-130	Pass	
Endrin ketone	%	94			70-130	Pass	
g-HCH (Lindane)	%	112			70-130	Pass	
Heptachlor	%	120			70-130	Pass	
Heptachlor epoxide	%	109			70-130	Pass	
Hexachlorobenzene	%	110			70-130	Pass	
Methoxychlor	%	111			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	112			70-130	Pass	
Dimethoate	%	86			70-130	Pass	
Ethion	%	102			70-130	Pass	
Fenitrothion	%	74			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Methyl parathion	%	104			70-130	Pass	
Mevinphos	%	94			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	85			70-130	Pass	
Aroclor-1260	%	84			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	91			25-140	Pass	
2.4-Dichlorophenol	%	98			25-140	Pass	
2.4.5-Trichlorophenol	%	84			25-140	Pass	
2.4.6-Trichlorophenol	%	94			25-140	Pass	
2.6-Dichlorophenol	%	95			25-140	Pass	
4-Chloro-3-methylphenol	%	93			25-140	Pass	
Pentachlorophenol	%	92			25-140	Pass	
Tetrachlorophenols - Total	%	93			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	85			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	84			25-140	Pass	
2-Nitrophenol	%	97			25-140	Pass	
2.4-Dimethylphenol	%	97			25-140	Pass	
2.4-Dinitrophenol	%	83			25-140	Pass	
2-Methylphenol (o-Cresol)	%	86			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	99			25-140	Pass	
4-Nitrophenol	%	86			25-140	Pass	
Dinoseb	%	92			25-140	Pass	
Phenol	%	91			25-140	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	113			80-120	Pass	
Cadmium	%	104			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	107			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	111			80-120	Pass	
LCS - % Recovery							
Per- and Polyfluoroalkyl Substances (PFASs) - Short							
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	72			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	77			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	73			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	101			50-150	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S24-My0007563	NCP	%	76			70-130	Pass	
TRH C10-C14	R24-Ap0075958	NCP	%	91			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-My0007563	NCP	%	79			70-130	Pass	
Toluene	S24-My0007563	NCP	%	87			70-130	Pass	
Ethylbenzene	S24-My0007563	NCP	%	90			70-130	Pass	
m&p-Xylenes	S24-My0007563	NCP	%	95			70-130	Pass	
o-Xylene	S24-My0007563	NCP	%	95			70-130	Pass	
Xylenes - Total*	S24-My0007563	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-My0007563	NCP	%	78			70-130	Pass	
TRH C6-C10	S24-My0007563	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-My0001844	NCP	%	112			70-130	Pass	
Acenaphthylene	S24-My0001844	NCP	%	109			70-130	Pass	
Anthracene	S24-My0001844	NCP	%	114			70-130	Pass	
Benz(a)anthracene	S24-My0001844	NCP	%	102			70-130	Pass	
Benzo(a)pyrene	S24-My0001844	NCP	%	118			70-130	Pass	
Benzo(b&j)fluoranthene	S24-My0001844	NCP	%	102			70-130	Pass	
Benzo(g.h.i)perylene	S24-My0001844	NCP	%	116			70-130	Pass	
Benzo(k)fluoranthene	S24-My0001844	NCP	%	125			70-130	Pass	
Chrysene	W24-My0017341	NCP	%	102			70-130	Pass	
Dibenz(a.h)anthracene	S24-My0001844	NCP	%	118			70-130	Pass	
Fluoranthene	S24-My0001844	NCP	%	109			70-130	Pass	
Fluorene	S24-My0001844	NCP	%	112			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-My0001844	NCP	%	122			70-130	Pass	
Naphthalene	S24-My0001844	NCP	%	108			70-130	Pass	
Phenanthrene	S24-My0001844	NCP	%	94			70-130	Pass	
Pyrene	S24-My0001844	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-My0013329	NCP	%	78			70-130	Pass	
4.4'-DDD	S24-My0013329	NCP	%	73			70-130	Pass	
4.4'-DDE	S24-My0013329	NCP	%	81			70-130	Pass	
4.4'-DDT	S24-My0016527	NCP	%	72			70-130	Pass	
a-HCH	S24-My0016527	NCP	%	92			70-130	Pass	
Aldrin	S24-My0016527	NCP	%	98			70-130	Pass	
b-HCH	S24-My0016527	NCP	%	91			70-130	Pass	
d-HCH	S24-My0016527	NCP	%	100			70-130	Pass	
Dieldrin	S24-My0013329	NCP	%	74			70-130	Pass	
Endosulfan I	S24-My0016527	NCP	%	84			70-130	Pass	
Endosulfan II	S24-My0016527	NCP	%	100			70-130	Pass	
Endosulfan sulphate	S24-My0016527	NCP	%	81			70-130	Pass	
Endrin	S24-My0013329	NCP	%	83			70-130	Pass	
Endrin aldehyde	S24-My0016527	NCP	%	113			70-130	Pass	
Endrin ketone	S24-My0013329	NCP	%	70			70-130	Pass	
g-HCH (Lindane)	S24-My0013329	NCP	%	80			70-130	Pass	
Heptachlor	S24-My0013329	NCP	%	71			70-130	Pass	
Heptachlor epoxide	S24-My0013329	NCP	%	73			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorobenzene	S24-My0013329	NCP	%	80			70-130	Pass	
Methoxychlor	S24-My0016527	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	N24-My0008596	NCP	%	103			70-130	Pass	
Dimethoate	N24-My0008596	NCP	%	90			70-130	Pass	
Ethion	R24-My0016745	NCP	%	129			70-130	Pass	
Fenitrothion	R24-My0016745	NCP	%	76			70-130	Pass	
Methyl parathion	R24-My0016745	NCP	%	98			70-130	Pass	
Mevinphos	N24-My0008596	NCP	%	80			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S24-My0016527	NCP	%	86			70-130	Pass	
Aroclor-1260	S24-My0013329	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S24-My0001844	NCP	%	77			30-130	Pass	
2.4-Dichlorophenol	S24-My0001844	NCP	%	109			30-130	Pass	
2.4.5-Trichlorophenol	S24-My0001844	NCP	%	100			30-130	Pass	
2.4.6-Trichlorophenol	S24-My0001844	NCP	%	105			30-130	Pass	
2.6-Dichlorophenol	S24-My0001844	NCP	%	110			30-130	Pass	
4-Chloro-3-methylphenol	S24-My0001844	NCP	%	105			30-130	Pass	
Pentachlorophenol	W24-My0017341	NCP	%	90			30-130	Pass	
Tetrachlorophenols - Total	S24-My0001844	NCP	%	102			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S24-My0001844	NCP	%	113			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S24-My0001844	NCP	%	108			30-130	Pass	
2-Nitrophenol	S24-My0001844	NCP	%	118			30-130	Pass	
2.4-Dimethylphenol	S24-My0001844	NCP	%	77			30-130	Pass	
2.4-Dinitrophenol	S24-My0001844	NCP	%	102			70-130	Pass	
2-Methylphenol (o-Cresol)	S24-My0001844	NCP	%	107			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S24-My0001844	NCP	%	102			30-130	Pass	
4-Nitrophenol	S24-My0001844	NCP	%	98			30-130	Pass	
Dinoseb	S24-My0001844	NCP	%	112			30-130	Pass	
Phenol	S24-My0001844	NCP	%	86			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	R24-Ap0075958	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-My0012803	NCP	%	99			75-125	Pass	
Cadmium	S24-My0012803	NCP	%	102			75-125	Pass	
Chromium	S24-My0012803	NCP	%	97			75-125	Pass	
Copper	S24-My0014055	NCP	%	104			75-125	Pass	
Lead	S24-My0012803	NCP	%	99			75-125	Pass	
Mercury	S24-My0012803	NCP	%	115			75-125	Pass	
Nickel	S24-My0012803	NCP	%	99			75-125	Pass	
Zinc	S24-My0012803	NCP	%	77			75-125	Pass	
Spike - % Recovery									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1					
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	N24-Ap0075269	CP	%	95			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanesulfonic acid (PFHxS)	N24-Ap0075269	CP	%	95			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	N24-Ap0075269	CP	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	N24-Ap0075269	CP	%	122			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S24-My0009858	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-My0009858	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-My0009858	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-My0009858	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-My0009858	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-My0009858	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-My0009858	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-My0009858	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S24-My0009858	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-My0014043	NCP	mg/kg	6.1	6.7	9.8	30%	Pass	
Cadmium	S24-My0014043	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-My0014043	NCP	mg/kg	7.3	8.0	9.8	30%	Pass	
Copper	S24-My0014043	NCP	mg/kg	19	19	1.3	30%	Pass	
Lead	S24-My0014043	NCP	mg/kg	9.4	10	9.7	30%	Pass	
Mercury	S24-My0014043	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-My0014043	NCP	mg/kg	< 5	5.1	34	30%	Fail	Q15
Zinc	S24-My0014043	NCP	mg/kg	25	27	8.3	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Ap0075089	NCP	%	19	15	20	30%	Pass	
Duplicate									
Per- and Polyfluoroalkyl Substances (PFASs) - Short				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	S24-Ap0076955	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S24-Ap0076955	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S24-Ap0076955	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S24-Ap0076955	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	N24-Ap0075269	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N24-Ap0075269	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N24-Ap0075269	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Benzo(b&j)fluoranthene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	N24-Ap0075269	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	N24-Ap0075269	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Fenthion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	N24-Ap0075269	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	N24-Ap0075269	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	N24-Ap0075269	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	N24-Ap0075269	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	N24-Ap0075269	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	N24-Ap0075269	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	N24-Ap0075269	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	N24-Ap0075269	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	N24-Ap0075269	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	N24-Ap0075269	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	N24-Ap0075269	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	N24-Ap0075269	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	N24-Ap0075269	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	N24-Ap0075269	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	N24-Ap0075269	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	N24-Ap0075269	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	N24-Ap0075269	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0075269	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N24-Ap0075269	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N24-Ap0075269	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Irem Haskara	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-PFAS
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Stantec Australia Pty Ltd
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Melbourne
VIC 3000

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Accreditation Number 1261
Site Number 18217

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Attention: **Callum Laker**

Report **1092003-W**
Project name Gilleston Heights
Project ID 304100928
Received Date Apr 30, 2024

Client Sample ID			**SW1**	**DUP1-W**	**RIN29/4/24**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**N24-Ap0075201**	**N24-Ap0075267**	**N24-Ap0075270**
Date Sampled			**Apr 29, 2024**	**Apr 29, 2024**	**Apr 29, 2024**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1
BTEX					
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	100	106	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1
Polycyclic Aromatic Hydrocarbons (Trace level)					
Acenaphthene	0.00001	mg/L	< 0.00001	< 0.00001	-
Acenaphthylene	0.00001	mg/L	< 0.00002	< 0.00001	-
Anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-
Benz(a)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-
Benzo(a)pyrene - low level	0.00001	mg/L	< 0.00001	< 0.00001	-
Benzo(b&j)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	-
Benzo(g.h.i)perylene	0.00001	mg/L	< 0.00001	< 0.00001	-
Benzo(k)fluoranthene	0.00001	mg/L	< 0.00001	< 0.00001	-
Chrysene	0.00001	mg/L	< 0.00001	< 0.00001	-
Dibenz(a.h)anthracene	0.00001	mg/L	< 0.00001	< 0.00001	-

Client Sample ID			SW1	DUP1-W	RIN29/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0075201	N24-Ap0075267	N24-Ap0075270
Date Sampled			Apr 29, 2024	Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons (Trace level)					
Fluoranthene	0.00001	mg/L	< 0.00002	< 0.00002	-
Fluorene	0.00001	mg/L	< 0.00001	< 0.00001	-
Indeno(1.2.3-cd)pyrene	0.00001	mg/L	< 0.00001	< 0.00001	-
Naphthalene	0.00001	mg/L	< 0.00002	< 0.00002	-
Phenanthrene	0.00001	mg/L	< 0.00001	< 0.00001	-
Pyrene	0.00001	mg/L	< 0.00002	< 0.00002	-
Total PAH*	0.00001	mg/L	< 0.00002	< 0.00002	-
2-Fluorobiphenyl (surr.)	1	%	71	137	-
p-Terphenyl-d14 (surr.)	1	%	94	93	-
Organophosphorus Pesticides (Trace level)					
Azinphos-methyl	0.001	mg/L	< 0.001	< 0.001	< 0.001
Bolstar	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chlorfenvinphos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Chlorpyrifos	0.01	mg/L	< 0.01	< 0.01	< 0.01
Chlorpyrifos-methyl	0.001	mg/L	< 0.001	< 0.001	< 0.001
Coumaphos	0.01	mg/L	< 0.01	< 0.01	< 0.01
Demeton-O	0.001	mg/L	< 0.001	< 0.001	< 0.001
Demeton-S	0.01	mg/L	< 0.01	< 0.01	< 0.01
Diazinon	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dichlorvos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dimethoate	0.001	mg/L	< 0.001	< 0.001	< 0.001
Disulfoton	0.001	mg/L	< 0.001	< 0.001	< 0.001
EPN	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ethion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ethoprop	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ethyl parathion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Fenitrothion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Fensulfothion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Fenthion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Malathion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Merphos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Methyl parathion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Mevinphos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Monocrotophos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Naled	0.001	mg/L	< 0.001	< 0.001	< 0.001
Omethoate	0.001	mg/L	< 0.001	< 0.001	< 0.001
Phorate	0.001	mg/L	< 0.001	< 0.001	< 0.001
Pirimiphos-methyl	0.01	mg/L	< 0.01	< 0.01	< 0.01
Pyrazophos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Ronnel	0.001	mg/L	< 0.001	< 0.001	< 0.001
Terbufos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Tetrachlorvinphos	0.001	mg/L	< 0.001	< 0.001	< 0.001
Tokuthion	0.001	mg/L	< 0.001	< 0.001	< 0.001
Trichloronate	0.001	mg/L	< 0.001	< 0.001	< 0.001
Triphenylphosphate (surr.)	1	%	122	135	86

Client Sample ID			SW1	DUP1-W	RIN29/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0075201	N24-Ap0075267	N24-Ap0075270
Date Sampled			Apr 29, 2024	Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit			
Polychlorinated Biphenyls (PCB trace level)					
Aroclor-1016	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1221	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1232	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1242	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1248	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1254	0.001	mg/L	< 0.001	< 0.001	< 0.001
Aroclor-1260	0.001	mg/L	< 0.001	< 0.001	< 0.001
Total PCB*	0.001	mg/L	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	102	87	148
Tetrachloro-m-xylene (surr.)	1	%	59	126	105
Organochlorine Pesticides (Trace level)					
4.4'-DDD	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
4.4'-DDE	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
4.4'-DDT	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
a-HCH	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Aldrin	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
b-HCH	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Chlordanes - Total	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
d-HCH	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Dieldrin	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endosulfan I	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endosulfan II	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endosulfan sulphate	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endrin	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endrin aldehyde	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Endrin ketone	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
g-HCH (Lindane)	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Heptachlor	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Heptachlor epoxide	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Hexachlorobenzene	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Methoxychlor	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Toxaphene	0.002	mg/L	< 0.002	< 0.002	< 0.002
DDT + DDE + DDD (Total)*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Aldrin and Dieldrin (Total)*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Vic EPA IWRG 621 OCP (Total)*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Vic EPA IWRG 621 Other OCP (Total)*	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Heavy Metals					
Arsenic	0.001	mg/L	0.015	0.016	< 0.001
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	0.014	0.008	< 0.001
Chromium (filtered)	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	0.019	0.011	< 0.001
Copper (filtered)	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	0.013	0.009	< 0.001
Lead (filtered)	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			SW1	DUP1-W	RIN29/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0075201	N24-Ap0075267	N24-Ap0075270
Date Sampled			Apr 29, 2024	Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit			
Heavy Metals					
Mercury (low-level)	0.00001	mg/L	< 0.00001	< 0.00001	< 0.00001
Nickel	0.001	mg/L	0.009	0.006	< 0.001
Nickel (filtered)	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	0.14	0.080	< 0.005
Zinc (filtered)	0.005	mg/L	-	-	< 0.005
Heavy metals (low level)					
Arsenic (low-level)	0.0005	mg/L	0.015	0.016	< 0.0005
PFASs Summations					
Sum (PFHxS + PFOS)*	0.001	ug/L	0.002	0.003	< 0.001
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.001	ug/L	0.004	0.005	< 0.001
Sum of PFASs (n=30)*	0.005	ug/L	0.017	0.017	< 0.005
Sum of US EPA PFAS (PFOS + PFOA)*	0.001	ug/L	0.004	0.004	< 0.001
Sum of WA DWER PFAS (n=10)*	0.005	ug/L	0.017	0.016	< 0.005
Perfluoroalkyl sulfonamido substances- Trace					
Perfluorooctane sulfonamide (FOSA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
13C8-FOSA (surr.)	1	%	105	108	103
D3-N-MeFOSA (surr.)	1	%	82	90	78
D5-N-EtFOSA (surr.)	1	%	64	79	71
D7-N-MeFOSE (surr.)	1	%	64	78	76
D9-N-EtFOSE (surr.)	1	%	59	66	82
D5-N-EtFOSAA (surr.)	1	%	151	143	99
D3-N-MeFOSAA (surr.)	1	%	129	126	119
Perfluoroalkyl carboxylic acids (PFCAs) - Trace					
Perfluorobutanoic acid (PFBA)[N11]	0.005	ug/L	< 0.01	< 0.01	< 0.005
Perfluoropentanoic acid (PFPeA)[N11]	0.001	ug/L	< 0.01	< 0.01	< 0.001
Perfluorohexanoic acid (PFHxA)[N11]	0.001	ug/L	0.009	0.007	< 0.001
Perfluoroheptanoic acid (PFHpA)[N11]	0.001	ug/L	0.002	0.002	< 0.001
Perfluorooctanoic acid (PFOA)[N11]	0.001	ug/L	0.002	0.002	< 0.001
Perfluorononanoic acid (PFNA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorodecanoic acid (PFDA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorotridecanoic acid (PFTrDA)[N15]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluoroundecanoic acid (PFUnDA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorododecanoic acid (PFDoDA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
13C4-PFBA (surr.)	1	%	INT	INT	70
13C5-PFPeA (surr.)	1	%	INT	INT	90
13C5-PFHxA (surr.)	1	%	55	57	97
13C4-PFHpA (surr.)	1	%	62	63	90
13C8-PFOA (surr.)	1	%	67	67	96

Client Sample ID			SW1	DUP1-W	RIN29/4/24
Sample Matrix			Water	Water	Water
Eurofins Sample No.			N24-Ap0075201	N24-Ap0075267	N24-Ap0075270
Date Sampled			Apr 29, 2024	Apr 29, 2024	Apr 29, 2024
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs) - Trace					
13C5-PFNA (surr.)	1	%	79	79	90
13C6-PFDA (surr.)	1	%	96	101	115
13C2-PFUnDA (surr.)	1	%	79	91	86
13C2-PFDoDA (surr.)	1	%	88	101	77
13C2-PFTeDA (surr.)	1	%	INT	INT	INT
Perfluoroalkyl sulfonic acids (PFSAs)- Trace					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.001	ug/L	0.002	0.002	< 0.001
Perfluorononanesulfonic acid (PFNS)[N15]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.001	ug/L	< 0.001	0.001	< 0.001
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.001	ug/L	< 0.001	0.001	< 0.001
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.001	ug/L	< 0.001	< 0.001	< 0.001
Perfluorooctanesulfonic acid (PFOS)[N11]	0.001	ug/L	0.002	0.002	< 0.001
Perfluorodecanesulfonic acid (PFDS)[N15]	0.001	ug/L	< 0.001	< 0.001	< 0.001
13C3-PFBS (surr.)	1	%	89	89	112
18O2-PFHxS (surr.)	1	%	94	103	105
13C8-PFOS (surr.)	1	%	102	111	102
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	0.005	ug/L	< 0.005	< 0.005	< 0.005
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.001	ug/L	< 0.001	< 0.001	< 0.001
13C2-4:2 FTSA (surr.)	1	%	113	136	INT
13C2-6:2 FTSA (surr.)	1	%	INT	INT	149
13C2-8:2 FTSA (surr.)	1	%	INT	INT	INT
13C2-10:2 FTSA (surr.)	1	%	INT	INT	185

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Polycyclic Aromatic Hydrocarbons (Trace level)	Melbourne	May 09, 2024	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water (trace)			
Organophosphorus Pesticides (Trace level)	Melbourne	May 03, 2024	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls (PCB trace level)	Melbourne	May 07, 2024	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
Organochlorine Pesticides (Trace level)	Melbourne	May 07, 2024	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270) trace			
Metals M8 filtered	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Mercury (low-level)	Melbourne	May 07, 2024	28 Days
- Method: LTM-MET-3050 Mercury by Cold Vapour Atomic Absorption Analysis			
Heavy metals (low level)	Sydney	May 03, 2024	180 Days
- Method: LTM-MET-3040 Metals in Waters Soils & Sediments by ICP-MS (low level)			
PFASs Summations	Sydney	Apr 30, 2024	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl sulfonamido substances- Trace	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl carboxylic acids (PFCAs) - Trace	Sydney	May 03, 2024	28 Day
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
Perfluoroalkyl sulfonic acids (PFSAs)- Trace	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS) - low level			

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Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

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Address: Level 22, 570 Bourke Street
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Project Name: Gilleston Heights
Project ID: 304100928

Order No.:
Report #: 1092003
Phone: (02) 9493 9700
Fax:

Received: Apr 30, 2024 8:00 AM
Due: May 7, 2024
Priority: 5 Day
Contact Name: Callum Laker

Eurofins Analytical Services Manager : Irem Haskara

Sample Detail						Arsenic (low-level)	Mercury (low-level)	Metals M8	Metals M8 filtered	Eurofins Suite B15	BTEX and Naphthalene	Moisture Set	Total Recoverable Hydrocarbons	Eurofins Suite B7A	Per- and Polyfluoroalkyl Substances (PFASs) - Short	Organophosphorus Pesticides (Trace level)	Polychlorinated Biphenyls (PCB trace level)	Organochlorine Pesticides (Trace level)	Per- and Polyfluoroalkyl Substances (PFASs) - Trace
Melbourne Laboratory - NATA # 1261 Site # 1254							X			X						X	X	X	
Sydney Laboratory - NATA # 1261 Site # 18217						X		X	X	X	X	X	X	X	X	X	X		X
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	SW1	Apr 29, 2024		Water	N24-Ap0075201	X	X	X			X		X			X	X	X	X
2	DUP1-W	Apr 29, 2024		Water	N24-Ap0075267	X	X	X			X		X			X	X	X	X
3	SED1	Apr 29, 2024		Soil	N24-Ap0075268					X		X		X	X				
4	SED DUP1	Apr 29, 2024		Soil	N24-Ap0075269					X		X		X	X				
5	RIN29/4/24	Apr 29, 2024		Water	N24-Ap0075270	X	X	X	X		X		X			X	X	X	X
Test Counts						3	3	3	1	2	3	2	3	2	2	3	3	3	3

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follow guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013. They are included in this QC report where applicable. Additional QC data may be available on request.
2. Unless otherwise stated, all soil/sediment/solid results are reported on a dry weight basis.
3. Unless otherwise stated, all biota/food results are reported on a wet weight basis on the edible portion.
4. For CEC results where the sample's origin is unknown or environmentally contaminated, the results should be used advisedly.
5. Actual LORs are matrix dependent. Quoted LORs may be raised where sample extracts are diluted due to interferences.
6. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds where annotated.
7. SVOC analysis on waters is performed on homogenised, unfiltered samples unless noted otherwise.
8. Samples were analysed on an 'as received' basis.
9. Information identified in this report with **blue** colour indicates data provided by customers that may have an impact on the results.
10. This report replaces any interim results previously issued.

Holding Times

Please refer to the 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours before sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and despite any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the sampling date; therefore, compliance with these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether, the holding time is seven days; however, for all other VOCs, such as BTEX or C6-10 TRH, the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should only be used as a guide and may be different when site-specific Sampling Analysis and Quality Plan (SAQP) have been implemented.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is ≤30%; however, the following acceptance guidelines are equally applicable:

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range, not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown are not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery, the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results, a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data; thus, it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	mg/L	< 0.00001			0.00001	Pass	
Acenaphthylene	mg/L	< 0.00001			0.00001	Pass	
Anthracene	mg/L	< 0.00001			0.00001	Pass	
Benz(a)anthracene	mg/L	< 0.00001			0.00001	Pass	
Benzo(a)pyrene - low level	mg/L	< 0.00001			0.00001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.00001			0.00001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Chrysene	mg/L	< 0.00001			0.00001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.00001			0.00001	Pass	
Fluoranthene	mg/L	< 0.00001			0.00001	Pass	
Fluorene	mg/L	< 0.00001			0.00001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.00001			0.00001	Pass	
Naphthalene	mg/L	< 0.00001			0.00001	Pass	
Phenanthrene	mg/L	< 0.00001			0.00001	Pass	
Pyrene	mg/L	< 0.00001			0.00001	Pass	
Method Blank							
Organophosphorus Pesticides (Trace level)							
Azinphos-methyl	mg/L	< 0.001			0.001	Pass	
Bolstar	mg/L	< 0.001			0.001	Pass	
Chlorfenvinphos	mg/L	< 0.001			0.001	Pass	
Chlorpyrifos	mg/L	< 0.01			0.01	Pass	
Chlorpyrifos-methyl	mg/L	< 0.001			0.001	Pass	
Coumaphos	mg/L	< 0.01			0.01	Pass	
Demeton-O	mg/L	< 0.001			0.001	Pass	
Demeton-S	mg/L	< 0.01			0.01	Pass	
Diazinon	mg/L	< 0.001			0.001	Pass	
Dichlorvos	mg/L	< 0.001			0.001	Pass	
Dimethoate	mg/L	< 0.001			0.001	Pass	
Disulfoton	mg/L	< 0.001			0.001	Pass	
EPN	mg/L	< 0.001			0.001	Pass	
Ethion	mg/L	< 0.001			0.001	Pass	
Ethoprop	mg/L	< 0.001			0.001	Pass	
Ethyl parathion	mg/L	< 0.001			0.001	Pass	
Fenitrothion	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fensulfothion	mg/L	< 0.001			0.001	Pass	
Fenthion	mg/L	< 0.001			0.001	Pass	
Malathion	mg/L	< 0.001			0.001	Pass	
Merphos	mg/L	< 0.001			0.001	Pass	
Methyl parathion	mg/L	< 0.001			0.001	Pass	
Mevinphos	mg/L	< 0.001			0.001	Pass	
Monocrotophos	mg/L	< 0.001			0.001	Pass	
Naled	mg/L	< 0.001			0.001	Pass	
Omethoate	mg/L	< 0.001			0.001	Pass	
Phorate	mg/L	< 0.001			0.001	Pass	
Pirimiphos-methyl	mg/L	< 0.01			0.01	Pass	
Pyrazophos	mg/L	< 0.001			0.001	Pass	
Ronnel	mg/L	< 0.001			0.001	Pass	
Terbufos	mg/L	< 0.001			0.001	Pass	
Tetrachlorvinphos	mg/L	< 0.001			0.001	Pass	
Tokuthion	mg/L	< 0.001			0.001	Pass	
Trichloronate	mg/L	< 0.001			0.001	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB trace level)							
Aroclor-1016	mg/L	< 0.001			0.001	Pass	
Aroclor-1221	mg/L	< 0.001			0.001	Pass	
Aroclor-1232	mg/L	< 0.001			0.001	Pass	
Aroclor-1242	mg/L	< 0.001			0.001	Pass	
Aroclor-1248	mg/L	< 0.001			0.001	Pass	
Aroclor-1254	mg/L	< 0.001			0.001	Pass	
Aroclor-1260	mg/L	< 0.001			0.001	Pass	
Total PCB*	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides (Trace level)							
4.4'-DDD	mg/L	< 0.00001			0.00001	Pass	
4.4'-DDE	mg/L	< 0.00001			0.00001	Pass	
4.4'-DDT	mg/L	< 0.00001			0.00001	Pass	
a-HCH	mg/L	< 0.00001			0.00001	Pass	
Aldrin	mg/L	< 0.00001			0.00001	Pass	
b-HCH	mg/L	< 0.00001			0.00001	Pass	
Chlordanes - Total	mg/L	< 0.00001			0.00001	Pass	
d-HCH	mg/L	< 0.00001			0.00001	Pass	
Dieldrin	mg/L	< 0.00001			0.00001	Pass	
Endosulfan I	mg/L	< 0.00001			0.00001	Pass	
Endosulfan II	mg/L	< 0.00001			0.00001	Pass	
Endosulfan sulphate	mg/L	< 0.00001			0.00001	Pass	
Endrin	mg/L	< 0.00001			0.00001	Pass	
Endrin aldehyde	mg/L	< 0.00001			0.00001	Pass	
Endrin ketone	mg/L	< 0.00001			0.00001	Pass	
g-HCH (Lindane)	mg/L	< 0.00001			0.00001	Pass	
Heptachlor	mg/L	< 0.00001			0.00001	Pass	
Heptachlor epoxide	mg/L	< 0.00001			0.00001	Pass	
Hexachlorobenzene	mg/L	< 0.00001			0.00001	Pass	
Methoxychlor	mg/L	< 0.00001			0.00001	Pass	
Toxaphene	mg/L	< 0.002			0.002	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (low-level)	mg/L	< 0.00001			0.00001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.005			0.005	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.005			0.005	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.005			0.005	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/L	< 0.005			0.005	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/L	< 0.005			0.005	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.005			0.005	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.005			0.005	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.001			0.001	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.001			0.001	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.001			0.001	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.001			0.001	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.001			0.001	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.001			0.001	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.001			0.001	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.001			0.001	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.001			0.001	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.001			0.001	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.001			0.001	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.001			0.001	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.001			0.001	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.001			0.001	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.001			0.001	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.001			0.001	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.001			0.001	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.001			0.001	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.001			0.001	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/L	< 0.005			0.005	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.001			0.001	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.001			0.001	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polychlorinated Biphenyls (PCB trace level)							
Total PCB*	mg/L	-			0.001	N/A	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy metals (low level)							
Arsenic (low-level)	mg/L	< 0.0005			0.0005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	106			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	94			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	102			70-130	Pass	
o-Xylene	%	96			70-130	Pass	
Xylenes - Total*	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	90			70-130	Pass	
TRH C6-C10	%	104			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons (Trace level)							
Acenaphthene	%	121			70-130	Pass	
Acenaphthylene	%	121			70-130	Pass	
Anthracene	%	85			70-130	Pass	
Benz(a)anthracene	%	117			70-130	Pass	
Benzo(a)pyrene - low level	%	85			70-130	Pass	
Benzo(b&j)fluoranthene	%	127			70-130	Pass	
Benzo(g.h.i)perylene	%	116			70-130	Pass	
Benzo(k)fluoranthene	%	118			70-130	Pass	
Chrysene	%	124			70-130	Pass	
Dibenz(a.h)anthracene	%	106			70-130	Pass	
Fluoranthene	%	107			70-130	Pass	
Fluorene	%	128			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	96			70-130	Pass	
Naphthalene	%	105			70-130	Pass	
Phenanthrene	%	130			70-130	Pass	
Pyrene	%	106			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides (Trace level)							
Diazinon	%	99			70-130	Pass	
Dimethoate	%	109			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethion	%	118			70-130	Pass	
Fenitrothion	%	114			70-130	Pass	
Methyl parathion	%	111			70-130	Pass	
Mevinphos	%	130			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides (Trace level)							
4.4'-DDD	%	113			70-130	Pass	
4.4'-DDE	%	104			70-130	Pass	
4.4'-DDT	%	106			70-130	Pass	
a-HCH	%	111			70-130	Pass	
Aldrin	%	105			70-130	Pass	
b-HCH	%	116			70-130	Pass	
Chlordanes - Total	%	111			70-130	Pass	
d-HCH	%	119			70-130	Pass	
Dieldrin	%	116			70-130	Pass	
Endosulfan I	%	118			70-130	Pass	
Endosulfan II	%	115			70-130	Pass	
Endosulfan sulphate	%	113			70-130	Pass	
Endrin	%	114			70-130	Pass	
Endrin aldehyde	%	101			70-130	Pass	
Endrin ketone	%	112			70-130	Pass	
g-HCH (Lindane)	%	116			70-130	Pass	
Heptachlor	%	108			70-130	Pass	
Heptachlor epoxide	%	117			70-130	Pass	
Hexachlorobenzene	%	99			70-130	Pass	
Methoxychlor	%	112			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	104			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	93			80-120	Pass	
Lead	%	93			80-120	Pass	
Mercury	%	89			80-120	Pass	
Mercury (low-level)	%	89			80-120	Pass	
Nickel	%	94			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorotridecanoic acid (PFTrDA)	%	122			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)- Trace							
Perfluorononanesulfonic acid (PFNS)	%	64			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances- Trace							
Perfluorooctane sulfonamide (FOSA)	%	88			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	108			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	112			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	98			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	108			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	82			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	94			50-150	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl carboxylic acids (PFCAs) - Trace							
Perfluorobutanoic acid (PFBA)	%	84			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	102			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	90			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	96			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	92			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	88			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	114			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)- Trace							
Perfluorobutanesulfonic acid (PFBS)	%	86			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	78			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	68			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	88			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	128			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	58			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)- Trace							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	82			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	90			50-150	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	91			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	89			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	93			80-120	Pass	
Cadmium (filtered)	%	88			80-120	Pass	
Chromium (filtered)	%	91			80-120	Pass	
Copper (filtered)	%	88			80-120	Pass	
Lead (filtered)	%	87			80-120	Pass	
Mercury (filtered)	%	94			80-120	Pass	
Nickel (filtered)	%	92			80-120	Pass	
Zinc (filtered)	%	89			80-120	Pass	
LCS - % Recovery							
Heavy metals (low level)							
Arsenic (low-level)	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	R24-My0000933	NCP	%	110			70-130	Pass	
TRH C10-C14	S24-My0006418	NCP	%	94			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	R24-My0000933	NCP	%	96			70-130	Pass	
Toluene	R24-My0000933	NCP	%	113			70-130	Pass	
Ethylbenzene	R24-My0000933	NCP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	R24-My0000933	NCP	%	105			70-130	Pass	
o-Xylene	R24-My0000933	NCP	%	100			70-130	Pass	
Xylenes - Total*	R24-My0000933	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	R24-My0000933	NCP	%	93			70-130	Pass	
TRH C6-C10	R24-My0000933	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S24-My0006418	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1					
Acenaphthene	M24-My0014452	NCP	%	101			70-130	Pass	
Acenaphthylene	M24-My0014452	NCP	%	97			70-130	Pass	
Anthracene	M24-My0014452	NCP	%	102			70-130	Pass	
Benz(a)anthracene	M24-My0014452	NCP	%	102			70-130	Pass	
Benzo(a)pyrene - low level	M24-My0014452	NCP	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	M24-My0014452	NCP	%	122			70-130	Pass	
Benzo(g.h.i)perylene	M24-My0014452	NCP	%	93			70-130	Pass	
Benzo(k)fluoranthene	M24-My0014452	NCP	%	110			70-130	Pass	
Chrysene	M24-My0014452	NCP	%	112			70-130	Pass	
Dibenz(a.h)anthracene	M24-My0014452	NCP	%	95			70-130	Pass	
Fluoranthene	M24-My0014452	NCP	%	105			70-130	Pass	
Fluorene	M24-My0014452	NCP	%	112			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M24-My0014452	NCP	%	85			70-130	Pass	
Naphthalene	M24-My0014452	NCP	%	104			70-130	Pass	
Phenanthrene	M24-My0014452	NCP	%	115			70-130	Pass	
Pyrene	M24-My0014452	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N24-Ap0076777	NCP	%	102			75-125	Pass	
Cadmium	N24-Ap0076777	NCP	%	98			75-125	Pass	
Chromium	N24-Ap0076777	NCP	%	88			75-125	Pass	
Copper	N24-Ap0076777	NCP	%	81			75-125	Pass	
Lead	N24-Ap0076777	NCP	%	83			75-125	Pass	
Mercury	N24-Ap0076777	NCP	%	81			75-125	Pass	
Nickel	N24-Ap0076777	NCP	%	83			75-125	Pass	
Zinc	N24-Ap0076777	NCP	%	87			75-125	Pass	
Spike - % Recovery									
Heavy metals (low level)				Result 1					
Arsenic (low-level)	N24-Ap0075201	CP	%	102			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	R24-My0000928	NCP	%	103			75-125	Pass	
Cadmium (filtered)	R24-My0000928	NCP	%	90			75-125	Pass	
Chromium (filtered)	R24-My0000928	NCP	%	88			75-125	Pass	
Copper (filtered)	R24-My0000928	NCP	%	83			75-125	Pass	
Lead (filtered)	R24-My0000928	NCP	%	83			75-125	Pass	
Mercury (filtered)	R24-My0000928	NCP	%	94			75-125	Pass	
Nickel (filtered)	R24-My0000928	NCP	%	88			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S24-My0000504	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	N24-Ap0071466	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	N24-Ap0071466	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	N24-Ap0071466	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-My0000504	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S24-My0000504	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S24-My0000504	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S24-My0000504	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S24-My0000504	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S24-My0000504	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-My0000504	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S24-My0000504	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Ap0071466	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	N24-Ap0071466	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	N24-Ap0071466	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons (Trace level)				Result 1	Result 2	RPD			
Acenaphthene	M24-My0011749	NCP	mg/L	0.00014	0.00013	8.9	30%	Pass	
Acenaphthylene	M24-My0011749	NCP	mg/L	< 0.00002	< 0.00002	<1	30%	Pass	
Anthracene	M24-My0011749	NCP	mg/L	< 0.00002	< 0.00002	<1	30%	Pass	
Benz(a)anthracene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(a)pyrene - low level	M24-My0020823	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(g.h.i)perylene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Benzo(k)fluoranthene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Chrysene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Dibenz(a.h)anthracene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Fluoranthene	M24-My0011749	NCP	mg/L	0.00014	0.00012	12	30%	Pass	
Fluorene	M24-My0011749	NCP	mg/L	0.00027	0.00029	4.6	30%	Pass	
Indeno(1.2.3-cd)pyrene	M24-My0011749	NCP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Naphthalene	M24-My0011749	NCP	mg/L	0.00015	0.00015	<1	30%	Pass	
Phenanthrene	M24-My0011749	NCP	mg/L	0.00007	0.00006	12	30%	Pass	
Pyrene	M24-My0011749	NCP	mg/L	0.00030	0.00031	5.2	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	R24-My0000930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	R24-My0000930	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	R24-My0000930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	R24-My0000930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	R24-My0000930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	R24-My0000930	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Mercury (low-level)	N24-Ap0075201	CP	mg/L	< 0.00001	< 0.00001	<1	30%	Pass	
Nickel	R24-My0000930	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	R24-My0000930	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S24-My0001958	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S24-My0001958	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S24-My0001958	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S24-My0001958	NCP	mg/L	0.002	0.002	3.9	30%	Pass	
Lead (filtered)	S24-My0001958	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S24-My0001958	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S24-My0001958	NCP	mg/L	0.004	0.004	<1	30%	Pass	
Zinc (filtered)	S24-My0001958	NCP	mg/L	0.023	0.018	22	30%	Pass	
Duplicate									
Heavy metals (low level)				Result 1	Result 2	RPD			
Arsenic (low-level)	N24-Ap0075270	CP	mg/L	< 0.0005	< 0.0005	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:

Irem Haskara	Analytical Services Manager
Edward Lee	Senior Analyst-Organic
Joseph Edouard	Senior Analyst-Organic
Mary Makarios	Senior Analyst-Metal
Mickael Ros	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-PFAS
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CERTIFICATE OF ANALYSIS

Work Order	: **ES2312555-AA**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100928 Gilliestone Public School	Date Samples Received	: 17-Apr-2023 16:15
Order number	: ----	Date Analysis Commenced	: 18-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023 09:59
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 9		
No. of samples analysed	: 9		

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
- Descriptive Results

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, 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.

- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: Analysis of asbestos from swabs and tapes is not covered under the current scope of NATA accreditation.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	VAL_B01	VAL_B02	VAL_B03	VAL_B04	VAL_W01_0.3
			Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ES2312555-001	ES2312555-002	ES2312555-003	ES2312555-004	ES2312555-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	13.0	15.5	17.4	12.6	20.9
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	13	9	38	6	51
Nickel	7440-02-0	2	mg/kg	----	----	8	----	----
Zinc	7440-66-6	5	mg/kg	27	34	46	21	64

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	VAL_W02_0.3	VAL_W03_0.3	----	----	----
			Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2312555-006	ES2312555-007	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**13.8**	**19.8**	**----**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	**102**	**391**	**----**	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**111**	**112**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: SOLID (Matrix: SOLID)			Sample ID	ACM_D14417_1	ACM_D14417_2	----	----	----
			Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2312555-008	ES2312555-009	--------	--------	--------
				Result	Result	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**Yes**	**Yes**	**----**	**----**	**----**
Asbestos Type	1332-21-4	-	--	**Ch + Am + Cr**	**Ch + Am + Cr**	**----**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres	**N/A**	**N/A**	**----**	**----**	**----**
Sample weight (dry)	----	0.01	g	**45.8**	**7.94**	**----**	**----**	**----**
Synthetic Mineral Fibre	----	-	-	**No**	**No**	**----**	**----**	**----**
Organic Fibre	----	-	-	**No**	**No**	**----**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--	**B.SCHRADER**	**B.SCHRADER**	**----**	**----**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	ACM_D14417_1 - 17-Apr-2023 00:00	One piece of asbestos cement sheeting approximately 95x75x5mm.
EA200: Description	ACM_D14417_2 - 17-Apr-2023 00:00	One piece of asbestos cement sheeting approximately 40x30x5mm.

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOLID) EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples

CERTIFICATE OF ANALYSIS

Work Order	: **ES2312555-AB**	Page	: 1 of 8
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100928 Gilliestone Public School	Date Samples Received	: 17-Apr-2023 16:15
Order number	: ----	Date Analysis Commenced	: 18-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023 09:59
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 3		
No. of samples analysed	: 3		

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
- Descriptive 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, 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.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SP01(S)_1_1.0	SP01(S)_2_0.4	SP01(S)_3_0.8	----	----
			Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2312555-010	ES2312555-011	ES2312555-012	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**26.8**	**24.1**	**28.2**	**----**	**----**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	**No**	**----**	**----**
Asbestos Type	1332-21-4	-	--	**-**	**-**	**-**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres	**No**	**No**	**No**	**----**	**----**
Sample weight (dry)	----	0.01	g	**485**	**422**	**540**	**----**	**----**
Synthetic Mineral Fibre	----	-	--	**No**	**No**	**No**	**----**	**----**
Organic Fibre	----	-	--	**No**	**No**	**No**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--	**B.SCHRADER**	**B.SCHRADER**	**B.SCHRADER**	**----**	**----**
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	**----**	**----**
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	**----**	**----**
ø Asbestos Containing Material	1332-21-4	0.1	g	<0.1	<0.1	<0.1	**----**	**----**
ø Asbestos Containing Material (as 15% Asbestos in ACM >7mm)	1332-21-4	0.01	% (w/w)	<0.01	<0.01	<0.01	**----**	**----**
ø Weight Used for % Calculation	----	0.0001	kg	**0.485**	**0.422**	**0.540**	**----**	**----**
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**5**	<5	**8**	**----**	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	**----**	**----**
Chromium	7440-47-3	2	mg/kg	**13**	**12**	**15**	**----**	**----**
Copper	7440-50-8	5	mg/kg	**15**	**23**	**20**	**----**	**----**
Lead	7439-92-1	5	mg/kg	**186**	**227**	**328**	**----**	**----**
Nickel	7440-02-0	2	mg/kg	**8**	**16**	**14**	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**129**	**273**	**207**	**----**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	**----**	**----**
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	**----**	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01(S)_1_1.0	SP01(S)_2_0.4	SP01(S)_3_0.8	----	----
				Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2312555-010	ES2312555-011	ES2312555-012	--------	--------
					Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		**0.61**	**0.79**	**1.83**	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		**0.61**	**0.79**	**1.83**	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01(S)_1_1.0	SP01(S)_2_0.4	SP01(S)_3_0.8	----	----
				Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2312555-010	ES2312555-011	ES2312555-012	--------	--------
					Result	Result	Result	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	**0.8**	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	**0.8**	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	**0.7**	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	**0.6**	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	**1.1**	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	**1.2**	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	**5.2**	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	**1.4**	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**1.7**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**2.0**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		**410**	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		**140**	<100	<100	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SP01(S)_1_1.0	SP01(S)_2_0.4	SP01(S)_3_0.8	----	----
				Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2312555-010	ES2312555-011	ES2312555-012	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued									
^ C10 - C36 Fraction (sum)	----	50	mg/kg		**550**	<50	<50	**----**	**----**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	**----**	**----**
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	**----**	**----**
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	**----**	**----**
>C16 - C34 Fraction	----	100	mg/kg		**510**	**110**	**120**	**----**	**----**
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	**----**	**----**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**510**	**110**	**120**	**----**	**----**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	**----**	**----**
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	**----**	**----**
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	**----**	**----**
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	**----**	**----**
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	**----**	**----**
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	**----**	**----**
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	**----**	**----**
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	**----**	**----**
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	**----**	**----**
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**95.2**	**73.6**	**81.9**	**----**	**----**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**81.6**	**88.3**	**105**	**----**	**----**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**86.4**	**60.6**	**108**	**----**	**----**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**84.8**	**100**	**101**	**----**	**----**
2-Chlorophenol-D4	93951-73-6	0.5	%		**94.7**	**94.4**	**94.9**	**----**	**----**
2.4.6-Tribromophenol	118-79-6	0.5	%		**88.6**	**90.2**	**87.1**	**----**	**----**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**98.7**	**98.7**	**100**	**----**	**----**
Anthracene-d10	1719-06-8	0.5	%		**97.5**	**98.5**	**100**	**----**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**84.6**	**87.0**	**92.8**	**----**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SP01(S)_1_1.0	SP01(S)_2_0.4	SP01(S)_3_0.8	----	----
			Sampling date / time	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2312555-010	ES2312555-011	ES2312555-012	--------	--------
				Result	Result	Result	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**100**	**92.7**	**88.3**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%	**96.9**	**97.6**	**94.9**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%	**93.5**	**90.5**	**88.2**	**----**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	SP01(S)_1_1.0 - 17-Apr-2023 00:00	A soil sample.
EA200: Description	SP01(S)_2_0.4 - 17-Apr-2023 00:00	A soil sample.
EA200: Description	SP01(S)_3_0.8 - 17-Apr-2023 00:00	A soil sample.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	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	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2312555-AA**	Page	: 1 of 3
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100928 Gilliestone Public School	Date Samples Received	: 17-Apr-2023
Order number	: ----	Date Analysis Commenced	: 18-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 9		
No. of samples analysed	: 9		

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, 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: 4997040)									
ES2312555-005	VAL_W01_0.3	EG005T: Nickel	7440-02-0	2	mg/kg	4	3	40.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	51	37	32.4	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	64	44	37.1	0% - 50%
ES2311909-001	Anonymous	EG005T: Nickel	7440-02-0	2	mg/kg	57	59	3.2	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	14	14	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	88	76	14.2	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4997044)									
ES2311923-002	Anonymous	EA055: Moisture Content	----	0.1	%	7.5	8.0	6.5	No Limit
ES2312555-007	VAL_W03_0.3	EA055: Moisture Content	----	0.1	%	19.8	18.7	5.6	0% - 20%

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: 4997040)								
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	93.6	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.3	66.0	133

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**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4997040)							
ES2311909-001	Anonymous	EG005T: Lead	7439-92-1	250 mg/kg	89.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	83.5	66.0	133

QUALITY CONTROL REPORT

Work Order	: **ES2312555-AB**	Page	: 1 of 10
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100928 Gilliestone Public School	Date Samples Received	: 17-Apr-2023
Order number	: ----	Date Analysis Commenced	: 18-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 3		
No. of samples analysed	: 3		

Accreditation No. 825
Accredited for compliance with
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- 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, 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.

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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: 4997040)									
ES2312555-005	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	28	31	11.5	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	4	3	40.1	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13	89.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	51	37	32.4	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	64	44	37.1	0% - 50%
ES2311909-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	11	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	57	59	3.2	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	112	100	11.5	0% - 20%
		EG005T: Lead	7439-92-1	5	mg/kg	14	14	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	88	76	14.2	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4997044)									
ES2311923-002	Anonymous	EA055: Moisture Content	----	0.1	%	7.5	8.0	6.5	No Limit
ES2312555-007	Anonymous	EA055: Moisture Content	----	0.1	%	19.8	18.7	5.6	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 4997041)									
ES2311909-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 4996593)									
ES2312555-010	SP01(S)_1_1.0	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 4996594)									
ES2312555-010	SP01(S)_1_1.0	EP068: alpha-BHC	319-84-6	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: 4996594) - continued									
ES2312555-010	SP01(S)_1_1.0	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	0.61	0.59	3.2	0% - 50%
		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: 4996594)									
ES2312555-010	SP01(S)_1_1.0	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

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: 4996591)									
ES2312555-010	SP01(S)_1_1.0	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: 4996485)									
ES2312210-017	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 4996592)									
ES2312555-010	SP01(S)_1_1.0	EP071: C15 - C28 Fraction	----	100	mg/kg	410	410	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	140	120	16.4	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: 4996485)									
ES2312210-017	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: 4996592)									
ES2312555-010	SP01(S)_1_1.0	EP071: >C16 - C34 Fraction	----	100	mg/kg	510	500	2.1	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: 4996485)									
ES2312210-017	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

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: BTEXN (QC Lot: 4996485) - continued									
ES2312210-017	Anonymous	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: 4997040)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	90.6	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	76.9	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	104	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	93.6	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.3	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4997041)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	87.8	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4996593)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	84.7	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 4996594)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.9	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	100	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	107	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.5	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.3	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.4	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	101	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.6	62.0	124

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
EP068A: Organochlorine Pesticides (OC) (QCLot: 4996594) - continued								
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	82.3	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	106	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	107	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4996594)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.5	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	77.4	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	100	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	77.2	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	96.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	78.5	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	91.0	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	108	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	79.1	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4996591)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.4	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	100	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	97.9	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	91.9	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	94.3	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	103	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	101	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	93.5	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	96.3	75.0	127

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4996591) - continued								
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	90.2	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	103	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	98.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	70.1	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	71.6	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	68.2	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4996485)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	93.0	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4996592)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	105	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	105	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4996485)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	91.9	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4996592)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	104	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	104	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	96.4	63.0	131
EP080: BTEXN (QCLot: 4996485)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	84.4	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	80.8	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	79.2	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	82.0	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	81.4	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	94.7	78.8	122

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

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4997040)							
ES2311909-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	90.7	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	86.8	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	89.3	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	94.8	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	89.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	83.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 4997041)							
ES2311909-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	96.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 4996593)							
ES2312555-010	SP01(S)_1_1.0	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	97.2	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 4996594)							
ES2312555-010	SP01(S)_1_1.0	EP068: gamma-BHC	58-89-9	0.5 mg/kg	108	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	104	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	96.6	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	113	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	94.1	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	94.3	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 4996594)							
ES2312555-010	SP01(S)_1_1.0	EP068: Diazinon	333-41-5	0.5 mg/kg	80.8	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	79.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	105	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	103	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	94.5	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 4996591)							
ES2312555-010	SP01(S)_1_1.0	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	95.5	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.8	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4996485)							
ES2312210-017	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	92.2	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 4996592)							
ES2312555-010	SP01(S)_1_1.0	EP071: C10 - C14 Fraction	----	480 mg/kg	107	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	102	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	119	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4996485)							
ES2312210-017	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95.0	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4996592)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 4996592) - continued							
ES2312555-010	SP01(S)_1_1.0	EP071: >C10 - C16 Fraction	----	860 mg/kg	100	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	105	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	122	52.0	132
EP080: BTEXN (QCLot: 4996485)							
ES2312210-017	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	85.0	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	82.4	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	85.8	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	85.3	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	87.6	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	96.4	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2312555**	Page	: 1 of 6
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Telephone	: +61-2-8784 8555
Project	: 304100928 Gilliestone Public School	Date Samples Received	: 17-Apr-2023
Site	: ----	Issue Date	: 20-Apr-2023
Sampler	: MICHAEL KOERNER	No. of samples received	: 12
Order number	: ----	No. of samples analysed	: 12

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)							
VAL_B01, VAL_B02, VAL_B03, VAL_B04, VAL_W01_0.3, VAL_W02_0.3, VAL_W03_0.3, SP01(S)_1_1.0, SP01(S)_2_0.4, SP01(S)_3_0.8	**17-Apr-2023**	**----**	----	----	**18-Apr-2023**	01-May-2023	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
SP01(S)_1_1.0, SP01(S)_2_0.4, SP01(S)_3_0.8	**17-Apr-2023**	**----**	----	----	**18-Apr-2023**	14-Oct-2023	✓
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
SP01(S)_1_1.0, SP01(S)_2_0.4, SP01(S)_3_0.8	**17-Apr-2023**	**----**	----	----	**18-Apr-2023**	14-Oct-2023	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
VAL_B01, VAL_B02, VAL_B03, VAL_B04, VAL_W01_0.3, VAL_W02_0.3, VAL_W03_0.3, SP01(S)_1_1.0, SP01(S)_2_0.4, SP01(S)_3_0.8	**17-Apr-2023**	**18-Apr-2023**	14-Oct-2023	✓	**18-Apr-2023**	14-Oct-2023	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SP01(S)_1_1.0, SP01(S)_2_0.4, SP01(S)_3_0.8	**17-Apr-2023**	**18-Apr-2023**	15-May-2023	✓	**19-Apr-2023**	15-May-2023	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
SP01(S)_3_0.8	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**18-Apr-2023**	28-May-2023	✓
Soil Glass Jar - Unpreserved (EP066)							
SP01(S)_1_1.0, SP01(S)_2_0.4	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**19-Apr-2023**	28-May-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
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**19-Apr-2023**	28-May-2023	✓
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**19-Apr-2023**	28-May-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**18-Apr-2023**	28-May-2023	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080)								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**18-Apr-2023**	01-May-2023	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080)								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**18-Apr-2023**	01-May-2023	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)								
SP01(S)_1_1.0, SP01(S)_3_0.8	SP01(S)_2_0.4,	**17-Apr-2023**	**18-Apr-2023**	01-May-2023	✓	**18-Apr-2023**	01-May-2023	✓

Matrix: **SOLID**

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
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
ACM_D14417_1,	ACM_D14417_2	**17-Apr-2023**	**----**	----	----	**18-Apr-2023**	14-Oct-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: **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	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	16	**6.25**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	9	**11.11**	**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).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
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.
Asbestos Identification in Bulk Solids	EA200	SOLID	In house: Referenced to AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining

Preparation Methods	Method	Matrix	Method Descriptions

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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

ADELAIDE 1 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

CAIRNS 8 Kelly Court Cairns QLD 4870 Ph: 07 4796 0300 E: cairns@alsglobal.com

MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

MELBOURNE 2-4 Westall Road Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com

MURDOCH 27 Sydney Road Murdoch WA 6150 Ph: 08 9317 7500 F: murdoch mail@alsglobal.com

NEWCASTLE 5/28 Mailland Rd Mayfield West NSW 2304 Ph: 02 4014 2500 E: samples.newcastle@alsglobal.com

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PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com

SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

TOWNSVILLE 14-15 Desma Court Bohle QLD 4818 Ph: 07 4796 0600 E: townsville@environmentalalsglobal.com

WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: wollongong@alsglobal.com

URGENT

CLIENT: Stantec Australia Pty Ltd	TURNAROUND REQUIREMENTS : (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date):	FOR LABORATORY USE ONLY (Circle)
OFFICE:		☑ Non Standard or urgent TAT (List due date): SAME DAY	Custody Seal Intact? Yes No N/A
PROJECT: 304100928	ALS QUOTE NO.:	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER: —		COC: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: 23.8 °C
PROJECT MANAGER: Callum Lake	CONTACT PH: 0476 978 773	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER: Michael Koerner	SAMPLER MOBILE: As above	RELINQUISHED BY: MK	RECEIVED BY: TOB
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME: 17/4/23	DATE/TIME: 17/4/23 4:14pm
Email Reports to (will default to PM if no other addresses are listed): michaelkoerner@arcadis.com.au		RELINQUISHED BY: TOB	RECEIVED BY: 5085Ke/Mo AS
Email Invoice to (will default to PM if no other addresses are listed): As above		DATE/TIME: 17/4/23 5pm	DATE/TIME: 17/4/23 1945

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL: Updated Analytical COC will be sent @1630.

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL CONTAINERS	HOLD								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	VAL_B01	17/4/23	Soil		2	X								
	VAL_B02	"	"		2	X								
	VAL_B03	"	"		2	X								
	VAL_B04	"	"		1	X								
	VAL_W01_0.3	"	"		1	X								
	VAL_W02_0.3	"	"		1	X								
	VAL_W03_0.3	"	"		1	X								
	ACM_D14417_01	"	Frag		1	X								
	ACM_D14417_2	"	Frag		1	X								
	SP01(S)_1_1.0	"	Soil		2	X								
	SP01(S)_2_0.4	"	"		2	X								
	SP01(S)_3_0.8	"	"		2	X								
				TOTAL										

Environmental Division Sydney
Work Order Reference
ES2312555

Telephone : +61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Stantec

CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Callum Laker	**Project Name:**	Gilliestone Public School
Telephone Number:	0417 493 692	**Project Number:**	304100982
Alternative Contact:	Michael Koerner	**PO No.:**	
Telephone Number:	0476 978 773	**Project Specific Quote No. :**	
Sampler:	Michael Koerner	**Date results required:**	SAME DAY
Email Address (results and invoice):	michael.koerner@cardno.com.au; callum.laker@cardno.com.au	**Report format:**	Electronic
Address: Level 9 - The Forum, 203 Pacific Highway, St Leonards, New South Wales 2065			

	Sample information					Analysis Required											
	Cardno Sample ID	Laboratory Sample ID	No. Containers	Preservation	Date sampled	Matrix	TRH/BTEXN/PAH/Metals 8/OCP/OPP/PCB	Asbestos (w/w%)	Lead	Nickel	Zinc	Asbestos ID in building materials					
1	VAL_B01		2	ICE	17/04/2023	SOIL			X		X						
2	VAL_B02		2	ICE	17/04/2023	SOIL			X		X						
3	VAL_B03		2	ICE	17/04/2023	SOIL			X	X	X						
4	VAL_B04		1	ICE	17/04/2023	SOIL			X		X						
5	VAL_W01_0.3		1	ICE	17/04/2023	SOIL			X		X						
6	VAL_W02_0.3		1	ICE	17/04/2023	SOIL			X		X						
7	VAL_W03_0.3		1	ICE	17/04/2023	SOIL			X		X						
8	ACM_D14417_1		1	ICE	17/04/2023	FRAGMENT						X					
9	ACM_D14417_2		1	ICE	17/04/2023	FRAGMENT						X					
10	SP01(S)_1_1.0		2	ICE	17/04/2023	SOIL	X	X									
11	SP01(S)_2_0.4		2	ICE	17/04/2023	SOIL	X	X									
12	SP01(S)_3_0.8		2	ICE	17/04/2023	SOIL	X	X									

Environmental Division
Sydney
Work Order Reference
ES2312555

Telephone : +61-2-8784 8555

SAME DAY TAT

Relinquished by:	Michael Koerner	**Received by:**	5085 PM AS	**Relinquished by:**	**Received by:**	**Relinquished by:**
(name / company)	Stantec	**(name / company)**		**(name / company)**	**(name / company)**	**(name / company)**
Date & Time:	17/04/2023 16:22	**Date & Time:**	17/4/23 1945	**Date & Time:**	**Date & Time:**	**Date & Time:**
Signature:	MK	**Signature:**		**Signature:**	**Signature:**	**Signature:**
Received by:		**Relinquished by:**		**Received by:**	**Relinquished by:**	*Lab use:*
(name / company)		**(name / company)**		**(name / company)**	**(name / company)**	**Samples Received: Cool or Ambient (circle one)**
Date & Time:		**Date & Time:**		**Date & Time:**	**Date & Time:**	**Temperature Received at:** **(if applicable)**
Signature:		**Signature:**		**Signature:**	**Signature:**	**Transported by: Hand delivered / courier**

CERTIFICATE OF ANALYSIS

Work Order	: **ES2312724**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100982 Gilliestone Public School	Date Samples Received	: 18-Apr-2023 16:08
Order number	: ----	Date Analysis Commenced	: 19-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023 14:43
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 11		
No. of samples analysed	: 11		

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

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*
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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	VAL_B05	VAL_B06	VAL_B07	VAL_W04	VAL_W05
			Sampling date / time	18-Apr-2023 00:00	18-Apr-2023 00:00	18-Apr-2023 00:00	17-Apr-2023 00:00	18-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ES2312724-001	ES2312724-002	ES2312724-003	ES2312724-004	ES2312724-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	12.3	17.1	18.3	18.0	24.8
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	24	164	235	249	152
Zinc	7440-66-6	5	mg/kg	24	137	322	164	80

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	VAL_W06	VAL_W07	VAL_W08	VAL_W09	VAL_W10
			Sampling date / time	18-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00	17-Apr-2023 00:00
Compound	CAS Number	LOR	Unit	ES2312724-006	ES2312724-007	ES2312724-008	ES2312724-009	ES2312724-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**18.0**	**11.7**	**8.4**	**22.3**	**43.9**
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	**181**	**55**	**16**	**36**	**87**
Zinc	7440-66-6	5	mg/kg	**147**	**43**	**12**	**34**	**55**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	VAL_W11	----	----	----	----
			Sampling date / time	17-Apr-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2312724-011	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**16.7**	**----**	**----**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Lead	7439-92-1	5	mg/kg	**39**	**----**	**----**	**----**	**----**
Zinc	7440-66-6	5	mg/kg	**36**	**----**	**----**	**----**	**----**

QUALITY CONTROL REPORT

Work Order	: **ES2312724**	Page	: 1 of 3
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Contact	: Customer Services ES
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: 304100982 Gilliestone Public School	Date Samples Received	: 18-Apr-2023
Order number	: ----	Date Analysis Commenced	: 19-Apr-2023
C-O-C number	: ----	Issue Date	: 20-Apr-2023
Sampler	: MICHAEL KOERNER		
Site	: ----		
Quote number	: EN/024/		
No. of samples received	: 11		
No. of samples analysed	: 11		

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*
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: 4999441)									
ES2312724-001	VAL_B05	EG005T: Lead	7439-92-1	5	mg/kg	24	18	29.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	24	17	34.8	No Limit
ES2312724-011	VAL_W11	EG005T: Lead	7439-92-1	5	mg/kg	39	34	11.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	36	50	33.3	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 4999442)									
ES2312724-001	VAL_B05	EA055: Moisture Content	----	0.1	%	12.3	12.1	2.1	0% - 20%
EW2301751-001	Anonymous	EA055: Moisture Content	----	0.1	%	13.6	15.6	14.3	0% - 50%

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: 4999441)								
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	83.7	82.0	119
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	74.1	66.0	133

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**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 4999441)							
ES2312724-001	VAL_B05	EG005T: Lead	7439-92-1	250 mg/kg	100	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	95.4	66.0	133

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2312724**	Page	: 1 of 4
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: Michael Koerner	Telephone	: +61-2-8784 8555
Project	: 304100982 Gilliestone Public School	Date Samples Received	: 18-Apr-2023
Site	: ----	Issue Date	: 20-Apr-2023
Sampler	: MICHAEL KOERNER	No. of samples received	: 11
Order number	: ----	No. of samples analysed	: 11

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)							
VAL_W04, VAL_W07, VAL_W08, VAL_W09, VAL_W10, VAL_W11	**17-Apr-2023**	**----**	----	----	**19-Apr-2023**	01-May-2023	✓
Soil Glass Jar - Unpreserved (EA055)							
VAL_B05, VAL_B06, VAL_B07, VAL_W05, VAL_W06	**18-Apr-2023**	**----**	----	----	**19-Apr-2023**	02-May-2023	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
VAL_W04, VAL_W07, VAL_W08, VAL_W09, VAL_W10, VAL_W11	**17-Apr-2023**	**19-Apr-2023**	14-Oct-2023	✓	**19-Apr-2023**	14-Oct-2023	✓
Soil Glass Jar - Unpreserved (EG005T)							
VAL_B05, VAL_B06, VAL_B07, VAL_W05, VAL_W06	**18-Apr-2023**	**19-Apr-2023**	15-Oct-2023	✓	**19-Apr-2023**	15-Oct-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: **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	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Metals by ICP-AES	EG005T	1	11	**9.09**	**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)

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).

Stantec

CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Callum Laker	**Project Name:**	Gilliestone Public School
Telephone Number:	0417 493 692	**Project Number:**	304100982
Alternative Contact:	Michael Koerner	**PO No.:**	
Telephone Number:	0476 978 773	**Project Specific Quote No. :**	
Sampler:	Michael Koerner	**Date results required:**	SAME DAY
Email Address (results and invoice):	michael.koerner@cardno.com.au; callum.laker@cardno.com.au	**Report format:**	Electronic
Address: Level 9 - The Forum, 203 Pacific Highway, St Leonards, New South Wales 2065			

Sample information | **Analysis Required**

	Cardno Sample ID	Laboratory Sample ID	No. Containers	Preservation	Date sampled	Matrix	Lead	Nickel	Zinc									
1	VAL_B05	18/4/23	1	ICE	18/04/2023	SOIL	X		X									
2	VAL_B06	↓	1	ICE	18/04/2023	SOIL	X		X									
3	VAL_B07	↓	1	ICE	18/04/2023	SOIL	X		X									
4	VAL_W04	0_2 17/4/23	1	ICE	18/04/2023	SOIL	X		X									
5	VAL_W05	0_3 18/4/23	1	ICE	18/04/2023	SOIL	X		X									
6	VAL_W06	0_1 ↓	1	ICE	18/04/2023	SOIL	X		X									
7	VAL_W07	0_2 17/4/23	1	ICE	18/04/2023	SOIL	X		X									
8	VAL_W08	0_1	1	ICE	18/04/2023	SOIL	X		X									
9	VAL_W09	0_3	1	ICE	18/04/2023	SOIL	X		X									
10	VAL_W10	0_2	1	ICE	18/04/2023	SOIL	X		X									
11	VAL_W11	0_3	1	ICE	18/04/2023	SOIL	X		X									

Environmental Division
Sydney
Work Order Reference
ES2312724

Telephone : +61-2-8784 8555

SAME DAY TAT

Relinquished by: (name / company)	Michael Koerner Stantec	**Received by:** (name / company)	JN ALS	**Relinquished by:** (name / company		**Received by:** (name / company)		**Relinquished by:** (name / company)	
Date & Time:	18/04/2023 16:05	**Date & Time:**	18.4.23 1600	**Date & Time:**		**Date & Time:**		**Date & Time:**	
Signature:	MK	**Signature:**		**Signature:**		**Signature:**		**Signature:**	
Received by: (name / company)		**Relinquished by:** (name / company)	ALS	**Received by:** (name / company	SOSSEP Lab	**Relinquished by:** (name / company)		*Lab use:* Samples Received: Cool or Ambient (circle one)	
Date & Time:		**Date & Time:**	18/4/23 5pm	**Date & Time:**	18/4/23 1940	**Date & Time:**		Temperature Received at:	(if applicable)

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	46

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE241126 R0**
Date Received	21/12/2022
Date Reported	13/1/2023

COMMENTS

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

% Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Report No: CE163795
No respirable fibres detected in all soil samples using trace analysis technique.
Samples # 2,5,9,10,14,19-20,27,31,34,38,42-43 : A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Bennet LO
Senior Chemist

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Ly Kim HA
Organic Section Head

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

VOC's in Soil [AN433] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH06_0.2 SOIL - 19/12/2022 SE241126.008
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017	BH28_1.0 SOIL - 19/12/2022 SE241126.018
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	0.1

VOC's in Soil [AN433] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044	TB SOIL - 21/12/2022 SE241126.045	TS SOIL - 21/12/2022 SE241126.046
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	[120%]
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	[104%]
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	[103%]
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	[105%]
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	[103%]
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	-
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	-
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	-

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH06_0.2 SOIL - 19/12/2022 SE241126.008
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017	BH28_1.0 SOIL - 19/12/2022 SE241126.018
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH06_0.2 SOIL - 19/12/2022 SE241126.008
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	**82**
TRH C37-C40	mg/kg	100	<100	<100	-	-	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	**110**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	**53**	**62**
TRH C37-C40	mg/kg	100	<100	<100	-	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	**93**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017	BH28_1.0 SOIL - 19/12/2022 SE241126.018
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	**52**	<45
TRH C37-C40	mg/kg	100	<100	<100	-	<100	-
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026
TRH C10-C14	mg/kg	20	<20	<20	<20	**44**	**28**
TRH C15-C28	mg/kg	45	<45	**130**	<45	**270**	**240**
TRH C29-C36	mg/kg	45	<45	**130**	<45	**150**	**130**
TRH C37-C40	mg/kg	100	-	<100	-	<100	<100
TRH >C10-C16	mg/kg	25	<25	**26**	<25	**63**	**41**
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	**26**	<25	**63**	**41**
TRH >C16-C34 (F3)	mg/kg	90	<90	**230**	<90	**380**	**330**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	**260**	<110	**470**	**400**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	**250**	<210	**440**	**370**

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**55**	<45	**94**	**86**	<45
TRH C29-C36	mg/kg	45	**60**	**53**	**110**	**65**	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**100**	<90	**180**	**130**	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**110**	<110	**210**	**150**	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**60**	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	**71**	<45	**54**	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**120**	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**130**	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45
TRH C29-C36	mg/kg	45	**59**	<45
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH06_0.2 SOIL - 19/12/2022 SE241126.008
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017	BH28_1.0 SOIL - 19/12/2022 SE241126.018
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.2**	**0.1**	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	**0.1**	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	**0.1**
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.4**	**0.2**
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.5**	**0.5**
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.8**	**0.8**
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.1**	**0.1**
Fluoranthene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.7**	**0.7**
Pyrene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.7**	**0.6**
Benzo(a)anthracene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.5**	**0.4**
Chrysene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.5**	**0.4**
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	**0.2**	<0.1	**0.7**	**0.5**
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.2**	**0.2**
Benzo(a)pyrene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.6**	**0.4**
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.5**	**0.2**
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	**0.1**	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	**0.1**	<0.1	**0.5**	**0.2**
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	**0.9**	**0.5**
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	**0.9**	**0.6**
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	**0.2**	<0.2	**0.9**	**0.6**
Total PAH (18)	mg/kg	0.8	<0.8	**1.5**	<0.8	**6.9**	**5.3**
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	**1.5**	<0.8	**6.1**	**4.6**

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	**0.1**	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	**0.1**	<0.1
Pyrene	mg/kg	0.1	**0.1**	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH11_0.1 SOIL - 21/12/2022 SE241126.032
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	**0.6**	**0.7**	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isodrin	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1	<1	<1	<1	<1
Total OC VIC EPA	mg/kg	1	<1	<1	<1	<1	<1

OC Pesticides in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH11_0.1 SOIL - 21/12/2022 SE241126.032
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

OP Pesticides in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Dichlorvos	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methidathion	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethion	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	<1.7	<1.7	<1.7

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH11_0.1 SOIL - 21/12/2022 SE241126.032
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PCBs in Soil [AN420] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Arochlor 1016	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1	<1	<1	<1	<1

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

pH in soil (1:5) [AN101] Tested: 5/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH14_1.5 SOIL - 20/12/2022 SE241126.024	BH17_0.9 SOIL - 21/12/2022 SE241126.044
pH	pH Units	0.1	**5.4**	**4.8**	**5.0**	**5.2**
pH (CaCl2)*	pH Units	0.1	**4.1**	**4.0**	**3.9**	**4.0**

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR) [AN122] Tested: 9/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH14_1.5 SOIL - 20/12/2022 SE241126.024	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Exchangeable Calcium, Ca	mg/kg	2	130	270	47	33
Exchangeable Calcium, Ca	meq/100g	0.01	0.65	1.4	0.24	0.16
Exchangeable Calcium Percentage*	%	0.1	38.9	22.2	6.6	4.5
Exchangeable Potassium, K	mg/kg	2	140	240	140	130
Exchangeable Potassium, K	meq/100g	0.01	0.36	0.61	0.35	0.33
Exchangeable Potassium Percentage*	%	0.1	21.4	10.0	9.7	9.2
Exchangeable Magnesium, Mg	mg/kg	2	74	480	300	310
Exchangeable Magnesium, Mg	meq/100g	0.02	0.60	3.9	2.5	2.5
Exchangeable Magnesium Percentage*	%	0.1	35.9	64.0	68.8	69.6
Exchangeable Sodium, Na	mg/kg	2	15	55	120	140
Exchangeable Sodium, Na	meq/100g	0.01	0.07	0.24	0.54	0.60
Exchangeable Sodium Percentage*	%	0.1	3.9	3.9	15.0	16.6
Cation Exchange Capacity	meq/100g	0.02	1.7	6.1	3.6	3.6

Field pH for Acid Sulphate Soil [AN104] Tested: 3/1/2023

PARAMETER	UOM	LOR	BH03_0.8-1.0 SOIL - 19/12/2022 SE241126.003	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH28_1.0 SOIL - 19/12/2022 SE241126.018	BH08_0.5 SOIL - 20/12/2022 SE241126.021
pHf	pH Units	-	5.0	4.7	4.8	4.7	5.3
pHfox	pH Units	-	4.7	4.3	4.1	4.3	4.0
Reaction Rate (pHfox)*	No unit	-	1	1	1	1	1
pH Difference*	pH Units	-10	0.3	0.3	0.8	0.4	1.2

PARAMETER	UOM	LOR	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_1.4 SOIL - 20/12/2022 SE241126.028	BH19_0.5 SOIL - 21/12/2022 SE241126.041
pHf	pH Units	-	5.1	5.0	7.7
pHfox	pH Units	-	4.8	4.2	6.7
Reaction Rate (pHfox)*	No unit	-	1	1	1
pH Difference*	pH Units	-10	0.2	0.7	1.0

TOC in Soil [AN188] Tested: 6/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH14_1.5 SOIL - 20/12/2022 SE241126.024	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Total Organic Carbon	%w/w	0.05	**0.93**	**0.72**	**0.12**	**0.08**

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH05_1.5 SOIL - 19/12/2022 SE241126.007
Arsenic, As	mg/kg	1	7	3	4	10	-
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Chromium, Cr	mg/kg	0.5	10	6.0	9.2	21	-
Copper, Cu	mg/kg	0.5	<0.5	0.5	0.9	<0.5	-
Lead, Pb	mg/kg	1	8	6	6	10	-
Nickel, Ni	mg/kg	0.5	1.1	1.5	0.8	0.9	-
Zinc, Zn	mg/kg	2	3.2	3.2	5.5	7.9	-
Iron, Fe	mg/kg	50	24000	-	-	-	29000

PARAMETER	UOM	LOR	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012
Arsenic, As	mg/kg	1	6	10	11	5	5
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	7.3	15	16	17	5.8
Copper, Cu	mg/kg	0.5	4.5	1.6	<0.5	1.0	2.3
Lead, Pb	mg/kg	1	16	10	7	6	9
Nickel, Ni	mg/kg	0.5	2.5	2.5	1.6	0.6	1.8
Zinc, Zn	mg/kg	2	26	11	7.9	8.2	14
Iron, Fe	mg/kg	50	-	-	-	-	-

PARAMETER	UOM	LOR	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Arsenic, As	mg/kg	1	2	1	1	4	3
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	2.8	4.1	4.2	8.1	3.8
Copper, Cu	mg/kg	0.5	2.5	2.2	2.0	<0.5	2.3
Lead, Pb	mg/kg	1	7	10	11	6	9
Nickel, Ni	mg/kg	0.5	1.2	1.4	1.5	2.0	1.4
Zinc, Zn	mg/kg	2	18	5.2	6.0	2.0	14
Iron, Fe	mg/kg	50	-	-	-	-	-

PARAMETER	UOM	LOR	BH28_1.0 SOIL - 19/12/2022 SE241126.018	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH14_1.5 SOIL - 20/12/2022 SE241126.024
Arsenic, As	mg/kg	1	10	8	9	8	-
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	-
Chromium, Cr	mg/kg	0.5	4.6	21	14	7.2	-
Copper, Cu	mg/kg	0.5	<0.5	0.9	12	0.9	-
Lead, Pb	mg/kg	1	6	10	380	17	-
Nickel, Ni	mg/kg	0.5	<0.5	1.6	7.7	<0.5	-
Zinc, Zn	mg/kg	2	2.3	8.6	230	9.2	-
Iron, Fe	mg/kg	50	-	-	-	-	32000

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/12/2022 (continued)

PARAMETER	UOM	LOR	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032
Arsenic, As	mg/kg	1	5	7	6	9	9
Cadmium, Cd	mg/kg	0.3	0.3	0.4	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	11	14	13	25	17
Copper, Cu	mg/kg	0.5	19	16	2.6	<0.5	5.4
Lead, Pb	mg/kg	1	380	490	9	5	26
Nickel, Ni	mg/kg	0.5	11	11	2.4	0.9	4.8
Zinc, Zn	mg/kg	2	260	290	15	7.9	71
Iron, Fe	mg/kg	50	-	-	-	-	-

PARAMETER	UOM	LOR	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039
Arsenic, As	mg/kg	1	6	8	5	5	4
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	12	13	10	4.3	6.9
Copper, Cu	mg/kg	0.5	3.8	<0.5	1.7	1.3	3.1
Lead, Pb	mg/kg	1	42	6	10	16	20
Nickel, Ni	mg/kg	0.5	2.4	<0.5	2.1	1.0	1.8
Zinc, Zn	mg/kg	2	39	2.8	10	15	19
Iron, Fe	mg/kg	50	-	-	-	-	-

PARAMETER	UOM	LOR	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Arsenic, As	mg/kg	1	6	12	5	6
Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3
Chromium, Cr	mg/kg	0.5	10	19	11	22
Copper, Cu	mg/kg	0.5	6.0	2.2	6.3	<0.5
Lead, Pb	mg/kg	1	15	10	18	4
Nickel, Ni	mg/kg	0.5	5.9	7.0	5.3	<0.5
Zinc, Zn	mg/kg	2	53	39	67	2.3
Iron, Fe	mg/kg	50	-	-	-	6200

Mercury in Soil [AN312] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH06_0.2 SOIL - 19/12/2022 SE241126.008
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017	BH28_1.0 SOIL - 19/12/2022 SE241126.018
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026
Mercury	mg/kg	0.05	<0.05	**0.06**	**0.06**	**0.06**	**0.05**

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	**0.06**	<0.05

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 30/12/2022

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH03_1.3-1.5 SOIL - 19/12/2022 SE241126.004	BH05_1.0 SOIL - 19/12/2022 SE241126.006	BH05_1.5 SOIL - 19/12/2022 SE241126.007
% Moisture	%w/w	1	6.8	5.7	12.2	16.3	15.0

PARAMETER	UOM	LOR	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH07_1.5 SOIL - 19/12/2022 SE241126.011	BH26_0.2 SOIL - 19/12/2022 SE241126.012
% Moisture	%w/w	1	11.7	5.5	5.1	6.3	5.5

PARAMETER	UOM	LOR	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	QA200 SOIL - 19/12/2022 SE241126.015	BH27_1.5 SOIL - 19/12/2022 SE241126.016	BH28_0.2 SOIL - 19/12/2022 SE241126.017
% Moisture	%w/w	1	26.3	21.4	19.4	20.1	8.4

PARAMETER	UOM	LOR	BH28_1.0 SOIL - 19/12/2022 SE241126.018	BH08_0.5 SOIL - 20/12/2022 SE241126.021	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH14_1.3 SOIL - 20/12/2022 SE241126.023	BH14_1.5 SOIL - 20/12/2022 SE241126.024
% Moisture	%w/w	1	14.3	10.3	12.4	8.7	9.1

PARAMETER	UOM	LOR	BH15_0.2 SOIL - 20/12/2022 SE241126.025	QA400 SOIL - 20/12/2022 SE241126.026	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH21_0.8 SOIL - 21/12/2022 SE241126.030	BH11_0.1 SOIL - 21/12/2022 SE241126.032
% Moisture	%w/w	1	12.4	12.6	7.8	11.0	13.0

PARAMETER	UOM	LOR	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_1.5 SOIL - 21/12/2022 SE241126.035	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039
% Moisture	%w/w	1	6.3	10.5	9.3	5.9	8.4

PARAMETER	UOM	LOR	BH19_0.2 SOIL - 21/12/2022 SE241126.040	BH19_0.5 SOIL - 21/12/2022 SE241126.041	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.9 SOIL - 21/12/2022 SE241126.044
% Moisture	%w/w	1	10.7	9.1	16.5	8.8

Fibre Identification in soil [AS4964/AN602] Tested: 6/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH04_0.2 SOIL - 19/12/2022 SE241126.005	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH06_0.5 SOIL - 19/12/2022 SE241126.009
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH07_0.5 SOIL - 19/12/2022 SE241126.010	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH27_0.5 SOIL - 19/12/2022 SE241126.014	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH01_0.2 SOIL - 20/12/2022 SE241126.019	BH08_0.2 SOIL - 20/12/2022 SE241126.020	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	BH15_0.5 SOIL - 20/12/2022 SE241126.027
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH22_0.1 SOIL - 21/12/2022 SE241126.031	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033	BH20_0.2 SOIL - 21/12/2022 SE241126.034
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH09_0.1 SOIL - 21/12/2022 SE241126.038	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	BH16_0.2 SOIL - 21/12/2022 SE241126.042	BH17_0.2 SOIL - 21/12/2022 SE241126.043
Asbestos Detected	No unit	-	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 6/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Total Sample Weight*	g	1	270	316	476	202	257
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033
Total Sample Weight*	g	1	340	196	390	393	353
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Total Sample Weight*	g	1	243	322	295	299
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 6/1/2023

PARAMETER	UOM	LOR	BH03_0.3 SOIL - 19/12/2022 SE241126.002	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH16_0.2 SOIL - 21/12/2022 SE241126.042
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0016

Particle sizing of soils <75µm by hydrometer [AN005] Tested: 10/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH14_1.5 SOIL - 20/12/2022 SE241126.024	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Clay (<0.002mm)*	%w/w	0.1	**5.0**	**20**	**5.0**	**4.0**

Particle sizing of soils by sieving [AN005] Tested: 10/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH05_1.5 SOIL - 19/12/2022 SE241126.007	BH14_1.5 SOIL - 20/12/2022 SE241126.024	BH17_0.9 SOIL - 21/12/2022 SE241126.044
Passing 75µm*	%w/w	1	**31**	**53**	**38**	**23**
Retained 75µm*	%w/w	1	**70**	**47**	**62**	**78**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN101	pH in Soil Sludge Sediment and Water: pH is measured electrometrically using a combination electrode and is calibrated against 3 buffers purchased commercially. For soils, sediments and sludges, an extract with water (or 0.01M CaCl2) is made at a ratio of 1:5 and the pH determined and reported on the extract. Reference APHA 4500-H+.
AN104	pHF is determined on an extract of approximately 2g of as received sample in approximately 10 mL of deionised water with pH determined after standing 30 minutes.
AN104	pHFox is determined on an extract of approximately 2g of as received sample with a few mLs of 30% hydrogen peroxide (adjusted to pH 4.5 to 5.5) with the extract reaction being rated from slight to extreme, with pH determined after reaction is complete and extract has cooled. Referenced to ASS Laboratory Methods Guidelines, method 23Af-Bf, 2004. 0 No Reaction 1 Slight Reaction 2 Moderate Reaction 3 Strong/High Reaction 4 Extreme/Vigorous Reaction (gas evolution and heat generation)
AN122	Exchangeable Cations, CEC and ESP: Soil sample is extracted in 1M Ammonium Acetate at pH=7 (or 1M Ammonium Chloride at pH=7) with cations (Na, K, Ca & Mg) then determined by ICP OES/ICP MS and reported as Exchangeable Cations. For saline soils, these results can be corrected for water soluble cations and reported as Exchangeable cations in meq/100g or soil can be pre-treated (aqueous ethanol/aqueous glycerol) prior to extraction. Cation Exchange Capacity (CEC) is the sum of the exchangeable cations in meq/100g.
AN122	The Exchangeable Sodium Percentage (ESP) is calculated as the exchangeable sodium divided by the CEC (all in meq/100g) times 100. ESP can be used to categorise the sodicity of the soil as below: ESP < 6% non-sodic ESP 6-15% sodic ESP >15% strongly sodic Method is referenced to Rayment and Lyons, 2011, sections 15D3 and 15N1.-
AN188	The organic material in the soil sample is oxidised with chromic acid in the presence of excess sulfuric acid, without external heat being applied. The excess dichromate ion is determined by titration with standard ammonium iron (II) sulfate solution and the amount of oxidised material is calculated from the quantity of dichromate reduced. Referenced to NEPM 105 and AS1289.1.1.1.
AN312	Mercury by Cold Vapour AAS in Soils: After digestion with nitric acid, hydrogen peroxide and hydrochloric acid, mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500

AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	SVOC Compounds: Semi-Volatile Organic Compounds (SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D).
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free/respirable fibres which are only observed by standard trace analysis as per AN602.

AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009 and NEPM 1999 (2013) schedule B1 section 4..
MA-1523	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

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CLIENT DETAILS

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Project	**304100928**
Order Number	**304100928**
Samples	46

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SGS Reference	**SE241126 R0**
Date Received	21 Dec 2022
Date Reported	13 Jan 2023

COMMENTS

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

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

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

Extraction Date	pH in soil (1:5)	4 items
Analysis Date	Moisture Content	19 items
	VOC's in Soil	42 items
	Volatile Petroleum Hydrocarbons in Soil	69 items
Surrogate	VOC's in Soil	3 items
	Volatile Petroleum Hydrocarbons in Soil	3 items
Duplicate	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	1 item
	Volatile Petroleum Hydrocarbons in Soil	1 item
Matrix Spike	TRH (Total Recoverable Hydrocarbons) in Soil	5 items

SAMPLE SUMMARY

Sample counts by matrix	46 Soil	Type of documentation received	COC
Date documentation received	22/12/2022@13:00F	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.1°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268396	19 Dec 2022	21 Dec 2022	16 Jan 2023	09 Jan 2023	16 Jan 2023	09 Jan 2023
BH05_1.5	SE241126.007	LB268396	19 Dec 2022	21 Dec 2022	16 Jan 2023	09 Jan 2023	16 Jan 2023	09 Jan 2023
BH14_1.5	SE241126.024	LB268396	20 Dec 2022	21 Dec 2022	17 Jan 2023	09 Jan 2023	17 Jan 2023	09 Jan 2023
BH17_0.9	SE241126.044	LB268396	21 Dec 2022	21 Dec 2022	18 Jan 2023	09 Jan 2023	18 Jan 2023	09 Jan 2023

Fibre Identification in soil

Method: ME-(AU)-[ENV]AS4964/AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268378	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH03_0.3	SE241126.002	LB268379	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH04_0.2	SE241126.005	LB268379	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH06_0.2	SE241126.008	LB268378	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH06_0.5	SE241126.009	LB268379	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH07_0.5	SE241126.010	LB268379	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH26_0.2	SE241126.012	LB268378	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268378	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH27_0.5	SE241126.014	LB268379	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH28_0.2	SE241126.017	LB268378	19 Dec 2022	21 Dec 2022	19 Dec 2023	06 Jan 2023	19 Dec 2023	10 Jan 2023
BH01_0.2	SE241126.019	LB268379	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH08_0.2	SE241126.020	LB268379	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH14_0.2	SE241126.022	LB268378	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH15_0.2	SE241126.025	LB268378	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH15_0.5	SE241126.027	LB268379	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH25_0.2	SE241126.029	LB268378	20 Dec 2022	21 Dec 2022	20 Dec 2023	06 Jan 2023	20 Dec 2023	10 Jan 2023
BH22_0.1	SE241126.031	LB268379	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH11_0.1	SE241126.032	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH18_0.2	SE241126.033	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH20_0.2	SE241126.034	LB268379	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH23_0.1	SE241126.036	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH12_0.1	SE241126.037	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH09_0.1	SE241126.038	LB268379	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH24_0.2	SE241126.039	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH19_0.2	SE241126.040	LB268378	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH16_0.2	SE241126.042	LB268379	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023
BH17_0.2	SE241126.043	LB268379	21 Dec 2022	21 Dec 2022	21 Dec 2023	06 Jan 2023	21 Dec 2023	10 Jan 2023

Field pH for Acid Sulphate Soil

Method: ME-(AU)-[ENV]AN104

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH03_0.8-1.0	SE241126.003	LB268260	19 Dec 2022	21 Dec 2022	16 Jan 2023	03 Jan 2023	16 Jan 2023	06 Jan 2023
BH05_1.0	SE241126.006	LB268260	19 Dec 2022	21 Dec 2022	16 Jan 2023	03 Jan 2023	16 Jan 2023	06 Jan 2023
BH05_1.5	SE241126.007	LB268260	19 Dec 2022	21 Dec 2022	16 Jan 2023	03 Jan 2023	16 Jan 2023	06 Jan 2023
BH28_1.0	SE241126.018	LB268260	19 Dec 2022	21 Dec 2022	16 Jan 2023	03 Jan 2023	16 Jan 2023	06 Jan 2023
BH08_0.5	SE241126.021	LB268260	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
BH14_1.3	SE241126.023	LB268260	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
BH15_1.4	SE241126.028	LB268260	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
BH19_0.5	SE241126.041	LB268260	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023

Gravimetric Determination of Asbestos in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268378	19 Dec 2022	21 Dec 2022	17 Jun 2023	06 Jan 2023	17 Jun 2023	10 Jan 2023
BH06_0.2	SE241126.008	LB268378	19 Dec 2022	21 Dec 2022	17 Jun 2023	06 Jan 2023	17 Jun 2023	10 Jan 2023
BH26_0.2	SE241126.012	LB268378	19 Dec 2022	21 Dec 2022	17 Jun 2023	06 Jan 2023	17 Jun 2023	10 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268378	19 Dec 2022	21 Dec 2022	17 Jun 2023	06 Jan 2023	17 Jun 2023	10 Jan 2023
BH28_0.2	SE241126.017	LB268378	19 Dec 2022	21 Dec 2022	17 Jun 2023	06 Jan 2023	17 Jun 2023	10 Jan 2023
BH14_0.2	SE241126.022	LB268378	20 Dec 2022	21 Dec 2022	18 Jun 2023	06 Jan 2023	18 Jun 2023	10 Jan 2023
BH15_0.2	SE241126.025	LB268378	20 Dec 2022	21 Dec 2022	18 Jun 2023	06 Jan 2023	18 Jun 2023	10 Jan 2023
BH25_0.2	SE241126.029	LB268378	20 Dec 2022	21 Dec 2022	18 Jun 2023	06 Jan 2023	18 Jun 2023	10 Jan 2023
BH11_0.1	SE241126.032	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023
BH18_0.2	SE241126.033	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023
BH23_0.1	SE241126.036	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023
BH12_0.1	SE241126.037	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023
BH24_0.2	SE241126.039	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023

HOLDING TIME SUMMARY

SE241126 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Gravimetric Determination of Asbestos in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH19_0.2	SE241126.040	LB268378	21 Dec 2022	21 Dec 2022	19 Jun 2023	06 Jan 2023	19 Jun 2023	10 Jan 2023

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH03_0.3	SE241126.002	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH05_1.0	SE241126.006	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH06_0.2	SE241126.008	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH06_0.5	SE241126.009	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH07_0.5	SE241126.010	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH07_1.5	SE241126.011	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH26_0.2	SE241126.012	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH27_0.5	SE241126.014	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
QA200	SE241126.015	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH27_1.5	SE241126.016	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH28_0.2	SE241126.017	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH28_1.0	SE241126.018	LB268191	19 Dec 2022	21 Dec 2022	16 Jan 2023	30 Dec 2022	16 Jan 2023	06 Jan 2023
BH08_0.5	SE241126.021	LB268191	20 Dec 2022	21 Dec 2022	17 Jan 2023	30 Dec 2022	17 Jan 2023	06 Jan 2023
BH14_0.2	SE241126.022	LB268191	20 Dec 2022	21 Dec 2022	17 Jan 2023	30 Dec 2022	17 Jan 2023	06 Jan 2023
BH14_1.3	SE241126.023	LB268191	20 Dec 2022	21 Dec 2022	17 Jan 2023	30 Dec 2022	17 Jan 2023	06 Jan 2023
BH15_0.2	SE241126.025	LB268259	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
QA400	SE241126.026	LB268259	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
BH25_0.2	SE241126.029	LB268259	20 Dec 2022	21 Dec 2022	17 Jan 2023	03 Jan 2023	17 Jan 2023	06 Jan 2023
BH21_0.8	SE241126.030	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH11_0.1	SE241126.032	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH18_0.2	SE241126.033	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH20_1.5	SE241126.035	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH23_0.1	SE241126.036	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH12_0.1	SE241126.037	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH24_0.2	SE241126.039	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH19_0.2	SE241126.040	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH19_0.5	SE241126.041	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH16_0.2	SE241126.042	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023
BH17_0.9	SE241126.044	LB268259	21 Dec 2022	21 Dec 2022	18 Jan 2023	03 Jan 2023	18 Jan 2023	06 Jan 2023

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH03_0.3	SE241126.002	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH03_1.3-1.5	SE241126.004	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH05_1.0	SE241126.006	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH05_1.5	SE241126.007	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH06_0.2	SE241126.008	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH06_0.5	SE241126.009	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH07_0.5	SE241126.010	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH07_1.5	SE241126.011	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH26_0.2	SE241126.012	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH27_0.1-0.2	SE241126.013	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH27_0.5	SE241126.014	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
QA200	SE241126.015	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH27_1.5	SE241126.016	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH28_0.2	SE241126.017	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH28_1.0	SE241126.018	LB268186	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH08_0.5	SE241126.021	LB268186	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH14_0.2	SE241126.022	LB268186	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH14_1.3	SE241126.023	LB268186	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	04 Jan 2023	06 Jan 2023†
BH14_1.5	SE241126.024	LB268247	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH15_0.2	SE241126.025	LB268247	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
QA400	SE241126.026	LB268247	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH25_0.2	SE241126.029	LB268247	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH21_0.8	SE241126.030	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH11_0.1	SE241126.032	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH18_0.2	SE241126.033	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH20_1.5	SE241126.035	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH23_0.1	SE241126.036	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH12_0.1	SE241126.037	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH24_0.2	SE241126.039	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH19_0.2	SE241126.040	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH19_0.5	SE241126.041	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH16_0.2	SE241126.042	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
BH17_0.9	SE241126.044	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023
TB	SE241126.045	LB268247	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	08 Jan 2023	06 Jan 2023

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH03_0.3	SE241126.002	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH05_1.0	SE241126.006	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH06_0.2	SE241126.008	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH06_0.5	SE241126.009	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH07_0.5	SE241126.010	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH07_1.5	SE241126.011	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH26_0.2	SE241126.012	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_0.5	SE241126.014	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
QA200	SE241126.015	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_1.5	SE241126.016	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH28_0.2	SE241126.017	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH28_1.0	SE241126.018	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH08_0.5	SE241126.021	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH14_0.2	SE241126.022	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH14_1.3	SE241126.023	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH15_0.2	SE241126.025	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
QA400	SE241126.026	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH25_0.2	SE241126.029	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH21_0.8	SE241126.030	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH11_0.1	SE241126.032	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH18_0.2	SE241126.033	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH20_1.5	SE241126.035	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH23_0.1	SE241126.036	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH12_0.1	SE241126.037	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH24_0.2	SE241126.039	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH19_0.2	SE241126.040	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH19_0.5	SE241126.041	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH16_0.2	SE241126.042	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH17_0.9	SE241126.044	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_0.3	SE241126.002	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH05_1.0	SE241126.006	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH06_0.2	SE241126.008	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH06_0.5	SE241126.009	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_0.5	SE241126.010	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_1.5	SE241126.011	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH26_0.2	SE241126.012	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH27_0.5	SE241126.014	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
QA200	SE241126.015	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_1.5	SE241126.016	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH28_0.2	SE241126.017	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH28_1.0	SE241126.018	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH08_0.5	SE241126.021	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH14_0.2	SE241126.022	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH14_1.3	SE241126.023	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	11 Jan 2023
BH15_0.2	SE241126.025	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
QA400	SE241126.026	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH25_0.2	SE241126.029	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH21_0.8	SE241126.030	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	11 Jan 2023
BH11_0.1	SE241126.032	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH18_0.2	SE241126.033	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH20_1.5	SE241126.035	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	11 Jan 2023
BH23_0.1	SE241126.036	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH12_0.1	SE241126.037	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH24_0.2	SE241126.039	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.2	SE241126.040	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.5	SE241126.041	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	11 Jan 2023
BH16_0.2	SE241126.042	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH17_0.9	SE241126.044	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	11 Jan 2023

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_0.3	SE241126.002	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH05_1.0	SE241126.006	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH06_0.2	SE241126.008	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH06_0.5	SE241126.009	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_0.5	SE241126.010	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_1.5	SE241126.011	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH26_0.2	SE241126.012	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_0.5	SE241126.014	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
QA200	SE241126.015	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_1.5	SE241126.016	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH28_0.2	SE241126.017	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH28_1.0	SE241126.018	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH08_0.5	SE241126.021	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH14_0.2	SE241126.022	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH14_1.3	SE241126.023	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH15_0.2	SE241126.025	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
QA400	SE241126.026	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH25_0.2	SE241126.029	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH21_0.8	SE241126.030	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH11_0.1	SE241126.032	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH18_0.2	SE241126.033	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH20_1.5	SE241126.035	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH23_0.1	SE241126.036	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH12_0.1	SE241126.037	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH24_0.2	SE241126.039	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.2	SE241126.040	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.5	SE241126.041	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH16_0.2	SE241126.042	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH17_0.9	SE241126.044	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023

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

Sample Name	Sample No.	QC Ref

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

PCBs in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH03_0.3	SE241126.002	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH05_1.0	SE241126.006	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH06_0.2	SE241126.008	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH06_0.5	SE241126.009	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH07_0.5	SE241126.010	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH07_1.5	SE241126.011	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH26_0.2	SE241126.012	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_0.5	SE241126.014	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
QA200	SE241126.015	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH27_1.5	SE241126.016	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH28_0.2	SE241126.017	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH28_1.0	SE241126.018	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH08_0.5	SE241126.021	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH14_0.2	SE241126.022	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH14_1.3	SE241126.023	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	10 Jan 2023
BH15_0.2	SE241126.025	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
QA400	SE241126.026	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH25_0.2	SE241126.029	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH21_0.8	SE241126.030	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH11_0.1	SE241126.032	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH18_0.2	SE241126.033	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH20_1.5	SE241126.035	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH23_0.1	SE241126.036	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH12_0.1	SE241126.037	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH24_0.2	SE241126.039	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH19_0.2	SE241126.040	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH19_0.5	SE241126.041	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH16_0.2	SE241126.042	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023
BH17_0.9	SE241126.044	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	10 Jan 2023

pH in soil (1:5)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268320	19 Dec 2022	21 Dec 2022	26 Dec 2022	05 Jan 2023†	06 Jan 2023	06 Jan 2023
BH05_1.5	SE241126.007	LB268320	19 Dec 2022	21 Dec 2022	26 Dec 2022	05 Jan 2023†	06 Jan 2023	06 Jan 2023
BH14_1.5	SE241126.024	LB268320	20 Dec 2022	21 Dec 2022	27 Dec 2022	05 Jan 2023†	06 Jan 2023	06 Jan 2023
BH17_0.9	SE241126.044	LB268320	21 Dec 2022	21 Dec 2022	28 Dec 2022	05 Jan 2023†	06 Jan 2023	06 Jan 2023

TOC in Soil

Method: ME-(AU)-[ENV]AN188

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268346	19 Dec 2022	21 Dec 2022	16 Jan 2023	06 Jan 2023	16 Jan 2023	06 Jan 2023
BH05_1.5	SE241126.007	LB268346	19 Dec 2022	21 Dec 2022	16 Jan 2023	06 Jan 2023	16 Jan 2023	06 Jan 2023
BH14_1.5	SE241126.024	LB268346	20 Dec 2022	21 Dec 2022	17 Jan 2023	06 Jan 2023	17 Jan 2023	06 Jan 2023
BH17_0.9	SE241126.044	LB268346	21 Dec 2022	21 Dec 2022	18 Jan 2023	06 Jan 2023	18 Jan 2023	06 Jan 2023

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH03_0.3	SE241126.002	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH05_1.0	SE241126.006	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH05_1.5	SE241126.007	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH06_0.2	SE241126.008	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH06_0.5	SE241126.009	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH07_0.5	SE241126.010	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH07_1.5	SE241126.011	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH26_0.2	SE241126.012	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH27_0.5	SE241126.014	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
QA200	SE241126.015	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH27_1.5	SE241126.016	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH28_0.2	SE241126.017	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH28_1.0	SE241126.018	LB268190	19 Dec 2022	21 Dec 2022	17 Jun 2023	30 Dec 2022	17 Jun 2023	09 Jan 2023
BH08_0.5	SE241126.021	LB268190	20 Dec 2022	21 Dec 2022	18 Jun 2023	30 Dec 2022	18 Jun 2023	09 Jan 2023
BH14_0.2	SE241126.022	LB268190	20 Dec 2022	21 Dec 2022	18 Jun 2023	30 Dec 2022	18 Jun 2023	09 Jan 2023
BH14_1.3	SE241126.023	LB268190	20 Dec 2022	21 Dec 2022	18 Jun 2023	30 Dec 2022	18 Jun 2023	09 Jan 2023
BH14_1.5	SE241126.024	LB268255	20 Dec 2022	21 Dec 2022	18 Jun 2023	03 Jan 2023	18 Jun 2023	09 Jan 2023
BH15_0.2	SE241126.025	LB268255	20 Dec 2022	21 Dec 2022	18 Jun 2023	03 Jan 2023	18 Jun 2023	09 Jan 2023
QA400	SE241126.026	LB268255	20 Dec 2022	21 Dec 2022	18 Jun 2023	03 Jan 2023	18 Jun 2023	09 Jan 2023
BH25_0.2	SE241126.029	LB268255	20 Dec 2022	21 Dec 2022	18 Jun 2023	03 Jan 2023	18 Jun 2023	09 Jan 2023
BH21_0.8	SE241126.030	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH11_0.1	SE241126.032	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH18_0.2	SE241126.033	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH20_1.5	SE241126.035	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH23_0.1	SE241126.036	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH12_0.1	SE241126.037	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH24_0.2	SE241126.039	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH19_0.2	SE241126.040	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH19_0.5	SE241126.041	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH16_0.2	SE241126.042	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023
BH17_0.9	SE241126.044	LB268255	21 Dec 2022	21 Dec 2022	19 Jun 2023	03 Jan 2023	19 Jun 2023	09 Jan 2023

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_0.3	SE241126.002	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH03_1.3-1.5	SE241126.004	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH05_1.0	SE241126.006	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH06_0.2	SE241126.008	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH06_0.5	SE241126.009	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_0.5	SE241126.010	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH07_1.5	SE241126.011	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH26_0.2	SE241126.012	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_0.1-0.2	SE241126.013	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_0.5	SE241126.014	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
QA200	SE241126.015	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH27_1.5	SE241126.016	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH28_0.2	SE241126.017	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH28_1.0	SE241126.018	LB268188	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH08_0.5	SE241126.021	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH14_0.2	SE241126.022	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH14_1.3	SE241126.023	LB268188	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	08 Feb 2023	09 Jan 2023
BH15_0.2	SE241126.025	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
QA400	SE241126.026	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH25_0.2	SE241126.029	LB268239	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH21_0.8	SE241126.030	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH11_0.1	SE241126.032	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH18_0.2	SE241126.033	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH20_1.5	SE241126.035	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH23_0.1	SE241126.036	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH12_0.1	SE241126.037	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH24_0.2	SE241126.039	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.2	SE241126.040	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH19_0.5	SE241126.041	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH16_0.2	SE241126.042	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023
BH17_0.9	SE241126.044	LB268239	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	12 Feb 2023	09 Jan 2023

VOC's in Soil

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

Sample Name	Sample No.	QC Ref

HOLDING TIME SUMMARY

SE241126 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

VOC's in Soil (continued)

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH03_0.3	SE241126.002	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH03_1.3-1.5	SE241126.004	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH05_1.0	SE241126.006	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH06_0.2	SE241126.008	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH06_0.5	SE241126.009	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH07_0.5	SE241126.010	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH07_1.5	SE241126.011	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH26_0.2	SE241126.012	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_0.1-0.2	SE241126.013	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_0.5	SE241126.014	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
QA200	SE241126.015	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_1.5	SE241126.016	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH28_0.2	SE241126.017	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH28_1.0	SE241126.018	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH08_0.5	SE241126.021	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH14_0.2	SE241126.022	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH14_1.3	SE241126.023	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH15_0.2	SE241126.025	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
QA400	SE241126.026	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
BH25_0.2	SE241126.029	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
BH21_0.8	SE241126.030	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	09 Jan 2023†
BH11_0.1	SE241126.032	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	09 Jan 2023†
BH18_0.2	SE241126.033	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH20_1.5	SE241126.035	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH23_0.1	SE241126.036	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH12_0.1	SE241126.037	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH24_0.2	SE241126.039	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH19_0.2	SE241126.040	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH19_0.5	SE241126.041	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH16_0.2	SE241126.042	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH17_0.9	SE241126.044	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
TB	SE241126.045	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
TS	SE241126.046	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH01_0.5	SE241126.001	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH03_0.3	SE241126.002	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH03_1.3-1.5	SE241126.004	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH05_1.0	SE241126.006	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH06_0.2	SE241126.008	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH06_0.5	SE241126.009	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH07_0.5	SE241126.010	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH07_1.5	SE241126.011	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH26_0.2	SE241126.012	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_0.1-0.2	SE241126.013	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_0.5	SE241126.014	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
QA200	SE241126.015	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH27_1.5	SE241126.016	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH28_0.2	SE241126.017	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH28_1.0	SE241126.018	LB268189	19 Dec 2022	21 Dec 2022	02 Jan 2023	30 Dec 2022	02 Jan 2023	09 Jan 2023†
BH08_0.5	SE241126.021	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH14_0.2	SE241126.022	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH14_1.3	SE241126.023	LB268189	20 Dec 2022	21 Dec 2022	03 Jan 2023	30 Dec 2022	03 Jan 2023	09 Jan 2023†
BH15_0.2	SE241126.025	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
QA400	SE241126.026	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
BH25_0.2	SE241126.029	LB268243	20 Dec 2022	21 Dec 2022	03 Jan 2023	03 Jan 2023	03 Jan 2023	09 Jan 2023†
BH21_0.8	SE241126.030	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	09 Jan 2023†
BH11_0.1	SE241126.032	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	09 Jan 2023†

HOLDING TIME SUMMARY

SE241126 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
BH18_0.2	SE241126.033	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH20_1.5	SE241126.035	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH23_0.1	SE241126.036	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH12_0.1	SE241126.037	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH24_0.2	SE241126.039	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH19_0.2	SE241126.040	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH19_0.5	SE241126.041	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH16_0.2	SE241126.042	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
BH17_0.9	SE241126.044	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	10 Jan 2023†
TB	SE241126.045	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	13 Jan 2023†
TS	SE241126.046	LB268243	21 Dec 2022	21 Dec 2022	04 Jan 2023	03 Jan 2023	04 Jan 2023	13 Jan 2023†

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	102
	BH03_0.3	SE241126.002	%	60 - 130%	102
	BH06_0.2	SE241126.008	%	60 - 130%	105
	BH06_0.5	SE241126.009	%	60 - 130%	103
	BH07_0.5	SE241126.010	%	60 - 130%	101
	BH26_0.2	SE241126.012	%	60 - 130%	102
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	110
	BH27_0.5	SE241126.014	%	60 - 130%	103
	QA200	SE241126.015	%	60 - 130%	102
	BH28_0.2	SE241126.017	%	60 - 130%	101
	BH14_0.2	SE241126.022	%	60 - 130%	107
	BH15_0.2	SE241126.025	%	60 - 130%	100
	QA400	SE241126.026	%	60 - 130%	99
	BH25_0.2	SE241126.029	%	60 - 130%	103
	BH11_0.1	SE241126.032	%	60 - 130%	103
	BH18_0.2	SE241126.033	%	60 - 130%	101
	BH23_0.1	SE241126.036	%	60 - 130%	102
	BH12_0.1	SE241126.037	%	60 - 130%	105
	BH24_0.2	SE241126.039	%	60 - 130%	106
	BH19_0.2	SE241126.040	%	60 - 130%	108
	BH16_0.2	SE241126.042	%	60 - 130%	112

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	75
	BH03_0.3	SE241126.002	%	60 - 130%	74
	BH06_0.2	SE241126.008	%	60 - 130%	75
	BH06_0.5	SE241126.009	%	60 - 130%	76
	BH07_0.5	SE241126.010	%	60 - 130%	76
	BH26_0.2	SE241126.012	%	60 - 130%	76
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	76
	BH27_0.5	SE241126.014	%	60 - 130%	74
	QA200	SE241126.015	%	60 - 130%	77
	BH28_0.2	SE241126.017	%	60 - 130%	81
	BH14_0.2	SE241126.022	%	60 - 130%	76
	BH15_0.2	SE241126.025	%	60 - 130%	76
	QA400	SE241126.026	%	60 - 130%	75
	BH25_0.2	SE241126.029	%	60 - 130%	75
	BH11_0.1	SE241126.032	%	60 - 130%	75
	BH18_0.2	SE241126.033	%	60 - 130%	75
	BH23_0.1	SE241126.036	%	60 - 130%	76
	BH12_0.1	SE241126.037	%	60 - 130%	75
	BH24_0.2	SE241126.039	%	60 - 130%	77
	BH19_0.2	SE241126.040	%	60 - 130%	73
	BH16_0.2	SE241126.042	%	60 - 130%	80
d14-p-terphenyl (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	79
	BH03_0.3	SE241126.002	%	60 - 130%	75
	BH06_0.2	SE241126.008	%	60 - 130%	78
	BH06_0.5	SE241126.009	%	60 - 130%	80
	BH07_0.5	SE241126.010	%	60 - 130%	80
	BH26_0.2	SE241126.012	%	60 - 130%	79
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	80
	BH27_0.5	SE241126.014	%	60 - 130%	77
	QA200	SE241126.015	%	60 - 130%	80
	BH28_0.2	SE241126.017	%	60 - 130%	84
	BH14_0.2	SE241126.022	%	60 - 130%	78
	BH15_0.2	SE241126.025	%	60 - 130%	78
	QA400	SE241126.026	%	60 - 130%	77
	BH25_0.2	SE241126.029	%	60 - 130%	79
	BH11_0.1	SE241126.032	%	60 - 130%	77
	BH18_0.2	SE241126.033	%	60 - 130%	77

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

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

OP Pesticides in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	BH23_0.1	SE241126.036	%	60 - 130%	79
	BH12_0.1	SE241126.037	%	60 - 130%	78
	BH24_0.2	SE241126.039	%	60 - 130%	80
	BH19_0.2	SE241126.040	%	60 - 130%	76
	BH16_0.2	SE241126.042	%	60 - 130%	83

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	BH01_0.5	SE241126.001	%	70 - 130%	75
	BH03_0.3	SE241126.002	%	70 - 130%	74
	BH03_1.3-1.5	SE241126.004	%	70 - 130%	73
	BH05_1.0	SE241126.006	%	70 - 130%	75
	BH06_0.2	SE241126.008	%	70 - 130%	75
	BH06_0.5	SE241126.009	%	70 - 130%	76
	BH07_0.5	SE241126.010	%	70 - 130%	76
	BH07_1.5	SE241126.011	%	70 - 130%	75
	BH26_0.2	SE241126.012	%	70 - 130%	76
	BH27_0.1-0.2	SE241126.013	%	70 - 130%	76
	BH27_0.5	SE241126.014	%	70 - 130%	74
	QA200	SE241126.015	%	70 - 130%	77
	BH27_1.5	SE241126.016	%	70 - 130%	75
	BH28_0.2	SE241126.017	%	70 - 130%	81
	BH28_1.0	SE241126.018	%	70 - 130%	71
	BH08_0.5	SE241126.021	%	70 - 130%	77
	BH14_0.2	SE241126.022	%	70 - 130%	76
	BH14_1.3	SE241126.023	%	70 - 130%	75
	BH15_0.2	SE241126.025	%	70 - 130%	76
	QA400	SE241126.026	%	70 - 130%	75
	BH25_0.2	SE241126.029	%	70 - 130%	75
	BH21_0.8	SE241126.030	%	70 - 130%	75
	BH11_0.1	SE241126.032	%	70 - 130%	75
	BH18_0.2	SE241126.033	%	70 - 130%	75
	BH20_1.5	SE241126.035	%	70 - 130%	75
	BH23_0.1	SE241126.036	%	70 - 130%	76
	BH12_0.1	SE241126.037	%	70 - 130%	75
	BH24_0.2	SE241126.039	%	70 - 130%	77
	BH19_0.2	SE241126.040	%	70 - 130%	73
	BH19_0.5	SE241126.041	%	70 - 130%	72
	BH16_0.2	SE241126.042	%	70 - 130%	80
	BH17_0.9	SE241126.044	%	70 - 130%	85
d14-p-terphenyl (Surrogate)	BH01_0.5	SE241126.001	%	70 - 130%	79
	BH03_0.3	SE241126.002	%	70 - 130%	75
	BH03_1.3-1.5	SE241126.004	%	70 - 130%	77
	BH05_1.0	SE241126.006	%	70 - 130%	80
	BH06_0.2	SE241126.008	%	70 - 130%	78
	BH06_0.5	SE241126.009	%	70 - 130%	80
	BH07_0.5	SE241126.010	%	70 - 130%	80
	BH07_1.5	SE241126.011	%	70 - 130%	80
	BH26_0.2	SE241126.012	%	70 - 130%	79
	BH27_0.1-0.2	SE241126.013	%	70 - 130%	80
	BH27_0.5	SE241126.014	%	70 - 130%	77
	QA200	SE241126.015	%	70 - 130%	80
	BH27_1.5	SE241126.016	%	70 - 130%	79
	BH28_0.2	SE241126.017	%	70 - 130%	84
	BH28_1.0	SE241126.018	%	70 - 130%	75
	BH08_0.5	SE241126.021	%	70 - 130%	81
	BH14_0.2	SE241126.022	%	70 - 130%	78
	BH14_1.3	SE241126.023	%	70 - 130%	79
	BH15_0.2	SE241126.025	%	70 - 130%	78
	QA400	SE241126.026	%	70 - 130%	77
	BH25_0.2	SE241126.029	%	70 - 130%	79

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d14-p-terphenyl (Surrogate)	BH21_0.8	SE241126.030	%	70 - 130%	78
	BH11_0.1	SE241126.032	%	70 - 130%	77
	BH18_0.2	SE241126.033	%	70 - 130%	77
	BH20_1.5	SE241126.035	%	70 - 130%	78
	BH23_0.1	SE241126.036	%	70 - 130%	79
	BH12_0.1	SE241126.037	%	70 - 130%	78
	BH24_0.2	SE241126.039	%	70 - 130%	80
	BH19_0.2	SE241126.040	%	70 - 130%	76
	BH19_0.5	SE241126.041	%	70 - 130%	75
	BH16_0.2	SE241126.042	%	70 - 130%	83
	BH17_0.9	SE241126.044	%	70 - 130%	89
d5-nitrobenzene (Surrogate)	BH01_0.5	SE241126.001	%	70 - 130%	85
	BH03_0.3	SE241126.002	%	70 - 130%	73
	BH03_1.3-1.5	SE241126.004	%	70 - 130%	82
	BH05_1.0	SE241126.006	%	70 - 130%	84
	BH06_0.2	SE241126.008	%	70 - 130%	84
	BH06_0.5	SE241126.009	%	70 - 130%	86
	BH07_0.5	SE241126.010	%	70 - 130%	85
	BH07_1.5	SE241126.011	%	70 - 130%	84
	BH26_0.2	SE241126.012	%	70 - 130%	85
	BH27_0.1-0.2	SE241126.013	%	70 - 130%	87
	BH27_0.5	SE241126.014	%	70 - 130%	84
	QA200	SE241126.015	%	70 - 130%	88
	BH27_1.5	SE241126.016	%	70 - 130%	84
	BH28_0.2	SE241126.017	%	70 - 130%	91
	BH28_1.0	SE241126.018	%	70 - 130%	81
	BH08_0.5	SE241126.021	%	70 - 130%	87
	BH14_0.2	SE241126.022	%	70 - 130%	87
	BH14_1.3	SE241126.023	%	70 - 130%	86
	BH15_0.2	SE241126.025	%	70 - 130%	87
	QA400	SE241126.026	%	70 - 130%	88
	BH25_0.2	SE241126.029	%	70 - 130%	88
	BH21_0.8	SE241126.030	%	70 - 130%	87
	BH11_0.1	SE241126.032	%	70 - 130%	88
	BH18_0.2	SE241126.033	%	70 - 130%	88
	BH20_1.5	SE241126.035	%	70 - 130%	87
	BH23_0.1	SE241126.036	%	70 - 130%	88
	BH12_0.1	SE241126.037	%	70 - 130%	87
	BH24_0.2	SE241126.039	%	70 - 130%	88
	BH19_0.2	SE241126.040	%	70 - 130%	84
	BH19_0.5	SE241126.041	%	70 - 130%	82
	BH16_0.2	SE241126.042	%	70 - 130%	92
	BH17_0.9	SE241126.044	%	70 - 130%	98

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	100
	BH03_0.3	SE241126.002	%	60 - 130%	100
	BH06_0.2	SE241126.008	%	60 - 130%	103
	BH06_0.5	SE241126.009	%	60 - 130%	101
	BH07_0.5	SE241126.010	%	60 - 130%	99
	BH26_0.2	SE241126.012	%	60 - 130%	99
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	108
	BH27_0.5	SE241126.014	%	60 - 130%	101
	QA200	SE241126.015	%	60 - 130%	100
	BH28_0.2	SE241126.017	%	60 - 130%	99
	BH14_0.2	SE241126.022	%	60 - 130%	102
	BH15_0.2	SE241126.025	%	60 - 130%	98
	QA400	SE241126.026	%	60 - 130%	96
	BH25_0.2	SE241126.029	%	60 - 130%	101
	BH11_0.1	SE241126.032	%	60 - 130%	100

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

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

PCBs in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	BH18_0.2	SE241126.033	%	60 - 130%	99
	BH23_0.1	SE241126.036	%	60 - 130%	100
	BH12_0.1	SE241126.037	%	60 - 130%	102
	BH24_0.2	SE241126.039	%	60 - 130%	104
	BH19_0.2	SE241126.040	%	60 - 130%	106
	BH16_0.2	SE241126.042	%	60 - 130%	110

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	113
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	91
	BH14_0.2	SE241126.022	%	0 - 150%	86
	BH25_0.2	SE241126.029	%	0 - 150%	98
	BH16_0.2	SE241126.042	%	0 - 150%	88
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	105
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	113
	BH14_0.2	SE241126.022	%	0 - 150%	109
	BH25_0.2	SE241126.029	%	0 - 150%	90
	BH16_0.2	SE241126.042	%	0 - 150%	103
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	92
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	102
	BH14_0.2	SE241126.022	%	0 - 150%	98
	BH25_0.2	SE241126.029	%	0 - 150%	95
	BH16_0.2	SE241126.042	%	0 - 150%	90
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	98
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	98
	BH14_0.2	SE241126.022	%	0 - 150%	103
	BH25_0.2	SE241126.029	%	0 - 150%	100
	BH16_0.2	SE241126.042	%	0 - 150%	101
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	97
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	89
	BH14_0.2	SE241126.022	%	0 - 150%	84
	BH25_0.2	SE241126.029	%	0 - 150%	91
	BH16_0.2	SE241126.042	%	0 - 150%	85
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	96
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	92
	BH14_0.2	SE241126.022	%	0 - 150%	73
	BH25_0.2	SE241126.029	%	0 - 150%	97
	BH16_0.2	SE241126.042	%	0 - 150%	79
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	114
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	115
	BH14_0.2	SE241126.022	%	0 - 150%	109
	BH25_0.2	SE241126.029	%	0 - 150%	110
	BH16_0.2	SE241126.042	%	0 - 150%	115
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	BH03_0.3	SE241126.002	%	0 - 150%	89
	BH27_0.1-0.2	SE241126.013	%	0 - 150%	96
	BH14_0.2	SE241126.022	%	0 - 150%	110
	BH25_0.2	SE241126.029	%	0 - 150%	96
	BH16_0.2	SE241126.042	%	0 - 150%	104

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	71
	BH03_0.3	SE241126.002	%	60 - 130%	86
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	62
	BH05_1.0	SE241126.006	%	60 - 130%	68
	BH06_0.2	SE241126.008	%	60 - 130%	82
	BH06_0.5	SE241126.009	%	60 - 130%	83
	BH07_0.5	SE241126.010	%	60 - 130%	73
	BH07_1.5	SE241126.011	%	60 - 130%	65
	BH26_0.2	SE241126.012	%	60 - 130%	82
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	57 ⓘ

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH27_0.5	SE241126.014	%	60 - 130%	73
	QA200	SE241126.015	%	60 - 130%	76
	BH27_1.5	SE241126.016	%	60 - 130%	74
	BH28_0.2	SE241126.017	%	60 - 130%	64
	BH28_1.0	SE241126.018	%	60 - 130%	84
	BH08_0.5	SE241126.021	%	60 - 130%	66
	BH14_0.2	SE241126.022	%	60 - 130%	64
	BH14_1.3	SE241126.023	%	60 - 130%	85
	BH15_0.2	SE241126.025	%	60 - 130%	78
	QA400	SE241126.026	%	60 - 130%	81
	BH25_0.2	SE241126.029	%	60 - 130%	88
	BH21_0.8	SE241126.030	%	60 - 130%	84
	BH11_0.1	SE241126.032	%	60 - 130%	77
	BH18_0.2	SE241126.033	%	60 - 130%	74
	BH20_1.5	SE241126.035	%	60 - 130%	74
	BH23_0.1	SE241126.036	%	60 - 130%	78
	BH12_0.1	SE241126.037	%	60 - 130%	74
	BH24_0.2	SE241126.039	%	60 - 130%	77
	BH19_0.2	SE241126.040	%	60 - 130%	66
	BH19_0.5	SE241126.041	%	60 - 130%	81
	BH16_0.2	SE241126.042	%	60 - 130%	74
	BH17_0.9	SE241126.044	%	60 - 130%	83
	TB	SE241126.045	%	60 - 130%	90
	TS	SE241126.046	%	60 - 130%	87
d4-1,2-dichloroethane (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	88
	BH03_0.3	SE241126.002	%	60 - 130%	87
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	86
	BH05_1.0	SE241126.006	%	60 - 130%	86
	BH06_0.2	SE241126.008	%	60 - 130%	96
	BH06_0.5	SE241126.009	%	60 - 130%	92
	BH07_0.5	SE241126.010	%	60 - 130%	86
	BH07_1.5	SE241126.011	%	60 - 130%	88
	BH26_0.2	SE241126.012	%	60 - 130%	93
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	78
	BH27_0.5	SE241126.014	%	60 - 130%	75
	QA200	SE241126.015	%	60 - 130%	82
	BH27_1.5	SE241126.016	%	60 - 130%	71
	BH28_0.2	SE241126.017	%	60 - 130%	86
	BH28_1.0	SE241126.018	%	60 - 130%	84
	BH08_0.5	SE241126.021	%	60 - 130%	80
	BH14_0.2	SE241126.022	%	60 - 130%	84
	BH14_1.3	SE241126.023	%	60 - 130%	88
	BH15_0.2	SE241126.025	%	60 - 130%	82
	QA400	SE241126.026	%	60 - 130%	86
	BH25_0.2	SE241126.029	%	60 - 130%	96
	BH21_0.8	SE241126.030	%	60 - 130%	88
	BH11_0.1	SE241126.032	%	60 - 130%	89
	BH18_0.2	SE241126.033	%	60 - 130%	87
	BH20_1.5	SE241126.035	%	60 - 130%	78
	BH23_0.1	SE241126.036	%	60 - 130%	83
	BH12_0.1	SE241126.037	%	60 - 130%	86
	BH24_0.2	SE241126.039	%	60 - 130%	91
	BH19_0.2	SE241126.040	%	60 - 130%	86
	BH19_0.5	SE241126.041	%	60 - 130%	92
	BH16_0.2	SE241126.042	%	60 - 130%	85
	BH17_0.9	SE241126.044	%	60 - 130%	92
	TB	SE241126.045	%	60 - 130%	90
	TS	SE241126.046	%	60 - 130%	96
d8-toluene (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	70
	BH03_0.3	SE241126.002	%	60 - 130%	65
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	74

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

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

VOC's in Soil (continued)

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BH05_1.0	SE241126.006	%	60 - 130%	78
	BH06_0.2	SE241126.008	%	60 - 130%	83
	BH06_0.5	SE241126.009	%	60 - 130%	75
	BH07_0.5	SE241126.010	%	60 - 130%	84
	BH07_1.5	SE241126.011	%	60 - 130%	81
	BH26_0.2	SE241126.012	%	60 - 130%	80
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	71
	BH27_0.5	SE241126.014	%	60 - 130%	63
	QA200	SE241126.015	%	60 - 130%	63
	BH27_1.5	SE241126.016	%	60 - 130%	69
	BH28_0.2	SE241126.017	%	60 - 130%	82
	BH28_1.0	SE241126.018	%	60 - 130%	71
	BH08_0.5	SE241126.021	%	60 - 130%	71
	BH14_0.2	SE241126.022	%	60 - 130%	73
	BH14_1.3	SE241126.023	%	60 - 130%	74
	BH15_0.2	SE241126.025	%	60 - 130%	74
	QA400	SE241126.026	%	60 - 130%	72
	BH25_0.2	SE241126.029	%	60 - 130%	87
	BH21_0.8	SE241126.030	%	60 - 130%	71
	BH11_0.1	SE241126.032	%	60 - 130%	85
	BH18_0.2	SE241126.033	%	60 - 130%	71
	BH20_1.5	SE241126.035	%	60 - 130%	55 ①
	BH23_0.1	SE241126.036	%	60 - 130%	64
	BH12_0.1	SE241126.037	%	60 - 130%	72
	BH24_0.2	SE241126.039	%	60 - 130%	74
	BH19_0.2	SE241126.040	%	60 - 130%	76
	BH19_0.5	SE241126.041	%	60 - 130%	59 ①
	BH16_0.2	SE241126.042	%	60 - 130%	70
	BH17_0.9	SE241126.044	%	60 - 130%	74
	TB	SE241126.045	%	60 - 130%	78
	TS	SE241126.046	%	60 - 130%	75

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	71
	BH03_0.3	SE241126.002	%	60 - 130%	86
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	62
	BH05_1.0	SE241126.006	%	60 - 130%	68
	BH06_0.2	SE241126.008	%	60 - 130%	82
	BH06_0.5	SE241126.009	%	60 - 130%	83
	BH07_0.5	SE241126.010	%	60 - 130%	73
	BH07_1.5	SE241126.011	%	60 - 130%	65
	BH26_0.2	SE241126.012	%	60 - 130%	82
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	57 ①
	BH27_0.5	SE241126.014	%	60 - 130%	73
	QA200	SE241126.015	%	60 - 130%	76
	BH27_1.5	SE241126.016	%	60 - 130%	74
	BH28_0.2	SE241126.017	%	60 - 130%	64
	BH28_1.0	SE241126.018	%	60 - 130%	84
	BH08_0.5	SE241126.021	%	60 - 130%	66
	BH14_0.2	SE241126.022	%	60 - 130%	64
	BH14_1.3	SE241126.023	%	60 - 130%	85
	BH15_0.2	SE241126.025	%	60 - 130%	78
	QA400	SE241126.026	%	60 - 130%	81
	BH25_0.2	SE241126.029	%	60 - 130%	88
	BH21_0.8	SE241126.030	%	60 - 130%	84
	BH11_0.1	SE241126.032	%	60 - 130%	77
	BH18_0.2	SE241126.033	%	60 - 130%	74
	BH20_1.5	SE241126.035	%	60 - 130%	74
	BH23_0.1	SE241126.036	%	60 - 130%	78
	BH12_0.1	SE241126.037	%	60 - 130%	74

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	BH24_0.2	SE241126.039	%	60 - 130%	77
	BH19_0.2	SE241126.040	%	60 - 130%	66
	BH19_0.5	SE241126.041	%	60 - 130%	81
	BH16_0.2	SE241126.042	%	60 - 130%	74
	BH17_0.9	SE241126.044	%	60 - 130%	83
d4-1,2-dichloroethane (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	88
	BH03_0.3	SE241126.002	%	60 - 130%	87
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	86
	BH05_1.0	SE241126.006	%	60 - 130%	86
	BH06_0.2	SE241126.008	%	60 - 130%	96
	BH06_0.5	SE241126.009	%	60 - 130%	92
	BH07_0.5	SE241126.010	%	60 - 130%	86
	BH07_1.5	SE241126.011	%	60 - 130%	88
	BH26_0.2	SE241126.012	%	60 - 130%	93
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	78
	BH27_0.5	SE241126.014	%	60 - 130%	75
	QA200	SE241126.015	%	60 - 130%	82
	BH27_1.5	SE241126.016	%	60 - 130%	71
	BH28_0.2	SE241126.017	%	60 - 130%	86
	BH28_1.0	SE241126.018	%	60 - 130%	84
	BH08_0.5	SE241126.021	%	60 - 130%	80
	BH14_0.2	SE241126.022	%	60 - 130%	84
	BH14_1.3	SE241126.023	%	60 - 130%	88
	BH15_0.2	SE241126.025	%	60 - 130%	82
	QA400	SE241126.026	%	60 - 130%	86
	BH25_0.2	SE241126.029	%	60 - 130%	96
	BH21_0.8	SE241126.030	%	60 - 130%	88
	BH11_0.1	SE241126.032	%	60 - 130%	89
	BH18_0.2	SE241126.033	%	60 - 130%	87
	BH20_1.5	SE241126.035	%	60 - 130%	78
	BH23_0.1	SE241126.036	%	60 - 130%	83
	BH12_0.1	SE241126.037	%	60 - 130%	86
	BH24_0.2	SE241126.039	%	60 - 130%	91
	BH19_0.2	SE241126.040	%	60 - 130%	86
	BH19_0.5	SE241126.041	%	60 - 130%	92
	BH16_0.2	SE241126.042	%	60 - 130%	85
	BH17_0.9	SE241126.044	%	60 - 130%	92
d8-toluene (Surrogate)	BH01_0.5	SE241126.001	%	60 - 130%	70
	BH03_0.3	SE241126.002	%	60 - 130%	65
	BH03_1.3-1.5	SE241126.004	%	60 - 130%	74
	BH05_1.0	SE241126.006	%	60 - 130%	78
	BH06_0.2	SE241126.008	%	60 - 130%	83
	BH06_0.5	SE241126.009	%	60 - 130%	75
	BH07_0.5	SE241126.010	%	60 - 130%	84
	BH07_1.5	SE241126.011	%	60 - 130%	81
	BH26_0.2	SE241126.012	%	60 - 130%	80
	BH27_0.1-0.2	SE241126.013	%	60 - 130%	71
	BH27_0.5	SE241126.014	%	60 - 130%	63
	QA200	SE241126.015	%	60 - 130%	63
	BH27_1.5	SE241126.016	%	60 - 130%	69
	BH28_0.2	SE241126.017	%	60 - 130%	82
	BH28_1.0	SE241126.018	%	60 - 130%	71
	BH08_0.5	SE241126.021	%	60 - 130%	71
	BH14_0.2	SE241126.022	%	60 - 130%	73
	BH14_1.3	SE241126.023	%	60 - 130%	74
	BH15_0.2	SE241126.025	%	60 - 130%	74
	QA400	SE241126.026	%	60 - 130%	72
	BH25_0.2	SE241126.029	%	60 - 130%	87
	BH21_0.8	SE241126.030	%	60 - 130%	71
	BH11_0.1	SE241126.032	%	60 - 130%	85
	BH18_0.2	SE241126.033	%	60 - 130%	71

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
d8-toluene (Surrogate)	BH20_1.5	SE241126.035	%	60 - 130%	55 ⓘ
	BH23_0.1	SE241126.036	%	60 - 130%	64
	BH12_0.1	SE241126.037	%	60 - 130%	72
	BH24_0.2	SE241126.039	%	60 - 130%	74
	BH19_0.2	SE241126.040	%	60 - 130%	76
	BH19_0.5	SE241126.041	%	60 - 130%	59 ⓘ
	BH16_0.2	SE241126.042	%	60 - 130%	70
	BH17_0.9	SE241126.044	%	60 - 130%	74

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

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

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

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

Sample Number	Parameter	Units	LOR	Result
LB268396.001	Exchangeable Sodium, Na	mg/kg	2	0.7813
	Exchangeable Potassium, K	mg/kg	2	0.9362
	Exchangeable Calcium, Ca	mg/kg	2	0.6061
	Exchangeable Magnesium, Mg	mg/kg	2	0.109

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB268191.001	Mercury	mg/kg	0.05	<0.05
LB268259.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268188.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	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
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	103
LB268239.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	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
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	98

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

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

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268188.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	78
		d14-p-terphenyl (Surrogate)	%	-	83
LB268239.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	75
		d14-p-terphenyl (Surrogate)	%	-	79

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268188.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1
		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	92
		2-fluorobiphenyl (Surrogate)	%	-	78
		d14-p-terphenyl (Surrogate)	%	-	83
LB268239.001		Naphthalene	mg/kg	0.1	<0.1
		2-methylnaphthalene	mg/kg	0.1	<0.1
		1-methylnaphthalene	mg/kg	0.1	<0.1
		Acenaphthylene	mg/kg	0.1	<0.1
		Acenaphthene	mg/kg	0.1	<0.1
		Fluorene	mg/kg	0.1	<0.1
		Phenanthrene	mg/kg	0.1	<0.1
		Anthracene	mg/kg	0.1	<0.1
		Fluoranthene	mg/kg	0.1	<0.1
		Pyrene	mg/kg	0.1	<0.1
		Benzo(a)anthracene	mg/kg	0.1	<0.1
		Chrysene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB268239.001		Benzo(a)pyrene	mg/kg	0.1	<0.1
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	84
		2-fluorobiphenyl (Surrogate)	%	-	75
		d14-p-terphenyl (Surrogate)	%	-	79

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268188.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	101
LB268239.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	96

TOC in Soil

Method: ME-(AU)-[ENV]AN188

Sample Number	Parameter	Units	LOR	Result
LB268346.001	Total Organic Carbon	%w/w	0.05	<0.05

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

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

Sample Number	Parameter	Units	LOR	Result
LB268190.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Iron, Fe	mg/kg	50	<50
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0
LB268255.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Iron, Fe	mg/kg	50	<50
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Sample Number	Parameter	Units	LOR	Result
LB268188.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110
LB268239.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268189.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98
		d8-toluene (Surrogate)	%	-	79
		Bromofluorobenzene (Surrogate)	%	-	82
	Totals	Total BTEX*	mg/kg	0.6	<0.6
LB268243.001	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1
	Hydrocarbons	Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88
		d8-toluene (Surrogate)	%	-	93
		Bromofluorobenzene (Surrogate)	%	-	75
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB268189.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	98
LB268243.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	88

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Field pH for Acid Sulphate Soil

Method: ME-(AU)-[ENV]AN104

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.041	LB268260.010	pHf	pH Units	-	7.7	7.7	30	0
		pHfox	pH Units	-	6.7	6.6	30	1

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268191.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE241126.023	LB268191.023	Mercury	mg/kg	0.05	0.06	<0.05	196	18
SE241126.039	LB268259.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE241273.003	LB268259.024	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.012	LB268186.011	% Moisture	%w/w	1	5.5	5.3	48	3
SE241126.023	LB268186.021	% Moisture	%w/w	1	8.7	9.2	41	6
SE241126.037	LB268247.011	% Moisture	%w/w	1	5.9	6.1	47	4
SE241273.001	LB268247.022	% Moisture	%w/w	1	13.2	13.6	37	3
SE241273.003	LB268247.025	% Moisture	%w/w	1	10.0	10.5	40	5

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.17	30	1
SE241126.039	LB268239.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.039	LB268239.014		Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.15	30	4

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE241126.039	LB268239.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	179	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014		Pyrene	mg/kg	0.1	<0.1	<0.1	186	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE241126.023	LB268188.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	1
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	0
SE241126.039	LB268239.014		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.039	LB268239.014		Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	30	2
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	2
SE241273.001	LB268239.021		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	0.1	<0.1	189	3
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	0.1	<0.1	148	26
			Pyrene	mg/kg	0.1	0.1	<0.1	162	12
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	88	110 ②
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	30	5
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	30	3

PCBs in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1
SE241126.039	LB268239.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	4

pH in soil (1:5)

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.044	LB268320.017	pH	pH Units	0.1	5.2	5.2	32	0
		pH (CaCl2)*	pH Units	0.1	4.0	3.9	33	1
SE241198.058	LB268320.016	pH	pH Units	0.1	6.2	6.6	32	6

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TOC in Soil

Method: ME-(AU)-[ENV]AN188

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.001	LB268346.004	Total Organic Carbon	%w/w	0.05	0.93	0.95	35	2

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.012	LB268190.014	Arsenic, As	mg/kg	1	5	4	53	13
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	5.8	5.7	39	2
		Copper, Cu	mg/kg	0.5	2.3	2.6	50	11
		Nickel, Ni	mg/kg	0.5	1.8	1.9	57	5
		Lead, Pb	mg/kg	1	9	9	41	1
		Zinc, Zn	mg/kg	2	14	15	44	4
SE241126.023	LB268190.024	Arsenic, As	mg/kg	1	8	7	44	16
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	7.2	6.9	37	5
		Copper, Cu	mg/kg	0.5	0.9	0.8	91	18
		Nickel, Ni	mg/kg	0.5	<0.5	<0.5	200	0
		Lead, Pb	mg/kg	1	17	13	37	22
		Zinc, Zn	mg/kg	2	9.2	6.7	55	31
SE241126.037	LB268255.015	Arsenic, As	mg/kg	1	5	4	52	32
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	200	0
		Chromium, Cr	mg/kg	0.5	4.3	5.2	41	20
		Copper, Cu	mg/kg	0.5	1.3	1.9	61	40
		Nickel, Ni	mg/kg	0.5	1.0	1.0	79	4
		Lead, Pb	mg/kg	1	16	15	36	6
		Zinc, Zn	mg/kg	2	15	15	43	2

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268188.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	46	131	2
			TRH C29-C36	mg/kg	45	62	51	109	18
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	168	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	93	<90	131	3
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE241126.023	LB268188.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE241126.039	LB268239.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	144	0
			TRH C29-C36	mg/kg	45	54	59	110	9
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	140	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE241273.001	LB268239.021		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241273.001	LB268239.021		TRH C29-C36	mg/kg	45	59	76	96	25
			TRH C10-C36 Total	mg/kg	110	<110	<110	192	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	169	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268189.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.8	8.4	50	7
			d8-toluene (Surrogate)	mg/kg	-	7.1	6.8	50	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	5.7	7.5	50	27
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE241126.023	LB268189.023	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.8	50	1
			d8-toluene (Surrogate)	mg/kg	-	7.4	8.3	50	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	6.6	50	25
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE241126.039	LB268243.014	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	7.7	50	17
			d8-toluene (Surrogate)	mg/kg	-	7.4	5.5	50	30
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	7.1	50	8
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE241273.001	LB268243.023	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	200	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.8	50	9
			d8-toluene (Surrogate)	mg/kg	-	7.6	5.8	50	27
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	7.5	50	16
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268189.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.8	8.4	30	7
			d8-toluene (Surrogate)	mg/kg	-	7.1	6.8	30	5
			Bromofluorobenzene (Surrogate)	mg/kg	-	5.7	7.5	30	27

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE241126.013	LB268189.014	VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE241126.023	LB268189.023		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.8	8.8	30	1
			d8-toluene (Surrogate)	mg/kg	-	7.4	8.3	30	11
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.5	6.6	30	25
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE241126.039	LB268243.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.1	7.7	30	17
			d8-toluene (Surrogate)	mg/kg	-	7.4	5.5	30	30 ①
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	7.1	30	8
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE241273.001	LB268243.023		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.6	7.8	30	9
			d8-toluene (Surrogate)	mg/kg	-	7.6	5.8	30	27
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.8	7.5	30	16
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

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

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268396.002	Exchangeable Sodium, Na	meq/100g	0.01	0.20	0.194	80 - 120	104
	Exchangeable Potassium, K	meq/100g	0.01	0.62	0.63	80 - 120	98
	Exchangeable Calcium, Ca	meq/100g	0.01	5.9	6.3	80 - 120	94
	Exchangeable Magnesium, Mg	meq/100g	0.02	1.1	1.11	80 - 120	95

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268191.002	Mercury	mg/kg	0.05	0.19	0.2	70 - 130	95
LB268259.002	Mercury	mg/kg	0.05	0.20	0.2	70 - 130	98

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268188.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	82
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	87
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	82
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	80
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	88
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	83
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	100
LB268239.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	84
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	87
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	84
		Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	83
		Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	89
		p,p'-DDT	mg/kg	0.1	0.1	0.2	60 - 140	69
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	40 - 130	98

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268188.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	83
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	89
		Dichlorvos	mg/kg	0.5	1.4	2	60 - 140	69
		Ethion	mg/kg	0.2	1.5	2	60 - 140	77
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	77
LB268239.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	2	60 - 140	87
		Diazinon (Dimpylate)	mg/kg	0.5	1.8	2	60 - 140	92
		Dichlorvos	mg/kg	0.5	1.4	2	60 - 140	68
		Ethion	mg/kg	0.2	1.7	2	60 - 140	83
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	77
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268188.002		Naphthalene	mg/kg	0.1	4.5	4	60 - 140	111
		Acenaphthylene	mg/kg	0.1	4.3	4	60 - 140	108
		Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	111
		Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	114
		Anthracene	mg/kg	0.1	4.5	4	60 - 140	112
		Fluoranthene	mg/kg	0.1	4.5	4	60 - 140	113
		Pyrene	mg/kg	0.1	4.3	4	60 - 140	106
		Benzo(a)pyrene	mg/kg	0.1	4.1	4	60 - 140	102
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	88
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	80
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	77
LB268239.002		Naphthalene	mg/kg	0.1	4.4	4	60 - 140	111
		Acenaphthylene	mg/kg	0.1	4.2	4	60 - 140	106
		Acenaphthene	mg/kg	0.1	4.4	4	60 - 140	110
		Phenanthrene	mg/kg	0.1	4.5	4	60 - 140	112
		Anthracene	mg/kg	0.1	4.4	4	60 - 140	110
		Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	111
		Pyrene	mg/kg	0.1	4.2	4	60 - 140	105

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268239.002		Benzo(a)pyrene	mg/kg	0.1	4.0	4	60 - 140	101
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	85
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	77
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.5	40 - 130	75

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268188.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	96
LB268239.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	93

pH in soil (1:5)

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268320.003	pH	pH Units	0.1	7.4	7.415	98 - 102	100

TOC in Soil

Method: ME-(AU)-[ENV]AN188

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268346.002	Total Organic Carbon	%w/w	0.05	0.29	0.325	80 - 120	90

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268190.002	Arsenic, As	mg/kg	1	330	318.22	80 - 120	105
	Cadmium, Cd	mg/kg	0.3	3.8	4.81	70 - 130	79
	Chromium, Cr	mg/kg	0.5	38	38.31	80 - 120	100
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	104
	Iron, Fe	mg/kg	50	39000	39905	80 - 120	99
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	99
	Lead, Pb	mg/kg	1	90	89.9	80 - 120	101
	Zinc, Zn	mg/kg	2	270	273	80 - 120	98
LB268255.002	Arsenic, As	mg/kg	1	340	318.22	80 - 120	108
	Cadmium, Cd	mg/kg	0.3	3.9	4.81	70 - 130	82
	Chromium, Cr	mg/kg	0.5	40	38.31	80 - 120	104
	Copper, Cu	mg/kg	0.5	310	290	80 - 120	106
	Iron, Fe	mg/kg	50	42000	39905	80 - 120	106
	Nickel, Ni	mg/kg	0.5	190	187	80 - 120	101
	Lead, Pb	mg/kg	1	92	89.9	80 - 120	102
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268188.002		TRH C10-C14	mg/kg	20	43	40	60 - 140	107
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	103
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	81
	TRH F Bands	TRH >C10-C16	mg/kg	25	44	40	60 - 140	110
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	97
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	82
LB268239.002		TRH C10-C14	mg/kg	20	38	40	60 - 140	96
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	95
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	78
	TRH F Bands	TRH >C10-C16	mg/kg	25	40	40	60 - 140	99
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	93
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	79

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268189.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.2	5	60 - 140	64
		Toluene	mg/kg	0.1	3.2	5	60 - 140	65
		Ethylbenzene	mg/kg	0.1	4.3	5	60 - 140	86
		m/p-xylene	mg/kg	0.2	8.3	10	60 - 140	83
		o-xylene	mg/kg	0.1	4.5	5	60 - 140	90

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268189.002	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		d8-toluene (Surrogate)	mg/kg	-	8.8	10	70 - 130	88
		Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	10	70 - 130	77
LB268243.002	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.7	5	60 - 140	74
		Toluene	mg/kg	0.1	3.5	5	60 - 140	69
		Ethylbenzene	mg/kg	0.1	5.3	5	60 - 140	106
		m/p-xylene	mg/kg	0.2	11	10	60 - 140	106
		o-xylene	mg/kg	0.1	5.6	5	60 - 140	112
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		d8-toluene (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB268189.002		TRH C6-C10	mg/kg	25	68	92.5	60 - 140	74
		TRH C6-C9	mg/kg	20	55	80	60 - 140	69
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	10	70 - 130	101
		Bromofluorobenzene (Surrogate)	mg/kg	-	7.7	10	70 - 130	77
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	45	62.5	60 - 140	72
LB268243.002		TRH C6-C10	mg/kg	25	78	92.5	60 - 140	84
		TRH C6-C9	mg/kg	20	70	80	60 - 140	87
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.2	10	70 - 130	102
		Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	10	70 - 130	93
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	49	62.5	60 - 140	78

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

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

Mercury in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268191.004	Mercury	mg/kg	0.05	0.22	<0.05	0.2	103
SE241126.025	LB268259.004	Mercury	mg/kg	0.05	0.24	0.06	0.2	92

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	85
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	89
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	85
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	<0.2	<0.2	0.2	83
			Endrin	mg/kg	0.2	<0.2	<0.2	0.2	91
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	86
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	-	102
SE241126.025	LB268239.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.2	<0.1	0.2	98
			Heptachlor	mg/kg	0.1	0.2	<0.1	0.2	104
			Aldrin	mg/kg	0.1	0.2	<0.1	0.2	97
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.8	0.6	0.2	114
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	105
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	81
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-

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

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

OC Pesticides in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.025	LB268239.004		Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	2	<1	-	-
			Total OC VIC EPA	mg/kg	1	2	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.15	0.15	-	102

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	1.7	<0.2	2	84
			Diazinon (Dimpylate)	mg/kg	0.5	1.8	<0.5	2	88
			Dichlorvos	mg/kg	0.5	1.4	<0.5	2	69
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	1.6	<0.2	2	79
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	6.4	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	-	92
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	90
SE241126.025	LB268239.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.0	<0.2	2	95
			Diazinon (Dimpylate)	mg/kg	0.5	2.1	<0.5	2	94
			Dichlorvos	mg/kg	0.5	1.6	<0.5	2	81
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.3	<0.2	2	116
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	8.0	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	77
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	74

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004		Naphthalene	mg/kg	0.1	4.4	<0.1	4	111
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	-	-
			Acenaphthylene	mg/kg	0.1	4.2	<0.1	4	106
			Acenaphthene	mg/kg	0.1	4.4	<0.1	4	110
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.5	<0.1	4	112
			Anthracene	mg/kg	0.1	4.4	<0.1	4	110
			Fluoranthene	mg/kg	0.1	4.4	<0.1	4	111
			Pyrene	mg/kg	0.1	4.2	<0.1	4	106
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Chrysene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.9	<0.1	4	98
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.9	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	4.0	<0.2	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	4.1	<0.3	-	-
			Total PAH (18)	mg/kg	0.8	35	<0.8	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.4	-	102

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.4	-	92
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	90
SE241126.025	LB268239.004		Naphthalene	mg/kg	0.1	4.5	0.2	4	106
			2-methylnaphthalene	mg/kg	0.1	0.1	0.4	-	-
			1-methylnaphthalene	mg/kg	0.1	0.2	0.5	-	-
			Acenaphthylene	mg/kg	0.1	4.1	<0.1	4	102
			Acenaphthene	mg/kg	0.1	4.3	<0.1	4	107
			Fluorene	mg/kg	0.1	<0.1	<0.1	-	-
			Phenanthrene	mg/kg	0.1	4.9	0.8	4	102
			Anthracene	mg/kg	0.1	4.2	0.1	4	103
			Fluoranthene	mg/kg	0.1	4.4	0.7	4	92
			Pyrene	mg/kg	0.1	4.3	0.7	4	91
			Benzo(a)anthracene	mg/kg	0.1	0.4	0.5	-	-
			Chrysene	mg/kg	0.1	0.4	0.5	-	-
			Benzo(b&j)fluoranthene	mg/kg	0.1	0.5	0.7	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.2	-	-
			Benzo(a)pyrene	mg/kg	0.1	3.5	0.6	4	72
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.5	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.3	0.5	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	3.6	0.9	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	3.7	0.9	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	3.7	0.9	-	-
			Total PAH (18)	mg/kg	0.8	37	6.9	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.4	0.4	-	89
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	77
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.4	0.4	-	74

PCBs in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	93
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	100
SE241126.025	LB268239.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.5	<0.2	0.4	117
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	100

TOC in Soil

Method: ME-(AU)-[ENV]AN188

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.044	LB268346.008	Total Organic Carbon	%w/w	0.05	0.40	0.08	-	-

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

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

QC Sample	Sample Number	Parameter	Units	LOR

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

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

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

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268190.004		Arsenic, As	mg/kg	1	54	7	50	94
			Cadmium, Cd	mg/kg	0.3	43	<0.3	50	87
			Chromium, Cr	mg/kg	0.5	56	10	50	92
			Copper, Cu	mg/kg	0.5	50	<0.5	50	99
			Nickel, Ni	mg/kg	0.5	50	1.1	50	98
			Lead, Pb	mg/kg	1	52	8	50	89
			Zinc, Zn	mg/kg	2	51	3.2	50	96

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268188.004		TRH C10-C14	mg/kg	20	43	<20	40	108
			TRH C15-C28	mg/kg	45	<45	<45	40	104
			TRH C29-C36	mg/kg	45	<45	<45	40	90
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	<110	<110	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	44	<25	40	111
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	44	<25	-	-
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	40	106
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-
SE241126.025	LB268239.004		TRH C10-C14	mg/kg	20	65	44	40	52 ⑤
			TRH C15-C28	mg/kg	45	240	270	40	-84 ⑤
			TRH C29-C36	mg/kg	45	140	150	40	-12 ⑤
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	450	470	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	400	440	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	79	63	40	40 ⑤
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	79	63	-	-
			TRH >C16-C34 (F3)	mg/kg	90	320	380	40	-141 ⑤
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268189.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.5	<0.1	5	71
			Toluene	mg/kg	0.1	3.4	<0.1	5	67
			Ethylbenzene	mg/kg	0.1	4.5	<0.1	5	89
			m/p-xylene	mg/kg	0.2	8.7	<0.2	10	87
			o-xylene	mg/kg	0.1	4.6	<0.1	5	92
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	8.8	10	97
			d8-toluene (Surrogate)	mg/kg	-	7.3	7.0	10	73
			Bromofluorobenzene (Surrogate)	mg/kg	-	7.2	7.1	10	72
		Totals	Total BTEX*	mg/kg	0.6	25	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	13	<0.3	-	-
SE241126.025	LB268243.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	3.9	<0.1	5	78
			Toluene	mg/kg	0.1	3.8	<0.1	5	75
			Ethylbenzene	mg/kg	0.1	5.1	<0.1	5	101
			m/p-xylene	mg/kg	0.2	9.9	<0.2	10	98
			o-xylene	mg/kg	0.1	5.2	<0.1	5	104
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.5	8.2	10	105
			d8-toluene (Surrogate)	mg/kg	-	10.9	7.4	10	109
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	7.8	10	86
		Totals	Total BTEX*	mg/kg	0.6	28	<0.6	-	-
			Total Xylenes*	mg/kg	0.3	15	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268189.004		TRH C6-C10	mg/kg	25	94	<25	92.5	101
			TRH C6-C9	mg/kg	20	76	<20	80	94
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.7	8.8	10	97
			d8-toluene (Surrogate)	mg/kg	-	7.3	7.0	10	73

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

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

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241126.001	LB268189.004	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	9.3	7.1	-	93
		VPH F	Benzene (F0)	mg/kg	0.1	3.5	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	69	<25	62.5	110
SE241126.025	LB268243.004		TRH C6-C10	mg/kg	25	99	<25	92.5	100
			TRH C6-C9	mg/kg	20	88	<20	80	104
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.5	8.2	10	105
			d8-toluene (Surrogate)	mg/kg	-	10.9	7.4	10	109
			Bromofluorobenzene (Surrogate)	mg/kg	-	8.6	7.8	-	86
		VPH F	Benzene (F0)	mg/kg	0.1	3.9	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	71	<25	62.5	103

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

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

QC Sample	Sample Number	Parameter	Units	LOR	Duplicate
SE241126.025	LB268255.006	Arsenic, As	mg/kg	1	56
		Cadmium, Cd	mg/kg	0.3	43
		Chromium, Cr	mg/kg	0.5	59
		Copper, Cu	mg/kg	0.5	67
		Nickel, Ni	mg/kg	0.5	56
		Lead, Pb	mg/kg	1	360
		Zinc, Zn	mg/kg	2	270

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	27

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE241126 R0**
Date Received	21 Dec 2022
Date Reported	13 Jan 2023

COMMENTS

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

% Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146. Report No: CE163795
No respirable fibres detected in all soil samples using trace analysis technique.
Samples # 2,5,9,10,14,19-20,27,31,34,38,42-43 : A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

S. Ravensdra.

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE241126.001	BH01_0.5	Soil	270g Clay,Soil,Rocks, Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.002	BH03_0.3	Soil	116g Clay,Sand,Soil	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.005	BH04_0.2	Soil	96g Sand,Soil,Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.008	BH06_0.2	Soil	316g Clay,Soil,Rocks, Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.009	BH06_0.5	Soil	149g Clay,Soil,Rocks	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.010	BH07_0.5	Soil	161g Clay,Sand,Soil,Rocks	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.012	BH26_0.2	Soil	476g Clay,Sand,Soil,Rocks,Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.013	BH27_0.1-0.2	Soil	202g Clay,Sand,Soil,Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.014	BH27_0.5	Soil	193g Clay,Soil	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.017	BH28_0.2	Soil	257g Clay,Sand,Soil,Rocks,Plant Matter	19 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.019	BH01_0.2	Soil	105g Clay,Sand,Soil,Rocks	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.020	BH08_0.2	Soil	84g Clay,Sand,Soil,Rocks,Plant Matter	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.022	BH14_0.2	Soil	340g Clay,Sand,Soil,Rocks,Plant Matter,Plastic	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.025	BH15_0.2	Soil	196g Clay,Sand,Soil,Rocks,Plant Matter,Glass	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.027	BH15_0.5	Soil	124g Clay,Sand,Rocks	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg	<0.01
SE241126.029	BH25_0.2	Soil	390g Clay,Sand,Soil,Rocks,Plant Matter	20 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE241126.031	BH22_0.1	Soil	103g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.032	BH11_0.1	Soil	393g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.033	BH18_0.2	Soil	353g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.034	BH20_0.2	Soil	124g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.036	BH23_0.1	Soil	243g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.037	BH12_0.1	Soil	322g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.038	BH09_0.1	Soil	112g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.039	BH24_0.2	Soil	295g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.040	BH19_0.2	Soil	299g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.042	BH16_0.2	Soil	95g Clay,Sand,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE241126.043	BH17_0.2	Soil	123g Clay,Sand,Soil,Rocks,Plant Matter	21 Dec 2022	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 6/1/2023

PARAMETER	UOM	LOR	BH01_0.5 SOIL - 19/12/2022 SE241126.001	BH06_0.2 SOIL - 19/12/2022 SE241126.008	BH26_0.2 SOIL - 19/12/2022 SE241126.012	BH27_0.1-0.2 SOIL - 19/12/2022 SE241126.013	BH28_0.2 SOIL - 19/12/2022 SE241126.017
Total Sample Weight*	g	1	**270**	**316**	**476**	**202**	**257**
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH14_0.2 SOIL - 20/12/2022 SE241126.022	BH15_0.2 SOIL - 20/12/2022 SE241126.025	BH25_0.2 SOIL - 20/12/2022 SE241126.029	BH11_0.1 SOIL - 21/12/2022 SE241126.032	BH18_0.2 SOIL - 21/12/2022 SE241126.033
Total Sample Weight*	g	1	**340**	**196**	**390**	**393**	**353**
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD	NAD

PARAMETER	UOM	LOR	BH23_0.1 SOIL - 21/12/2022 SE241126.036	BH12_0.1 SOIL - 21/12/2022 SE241126.037	BH24_0.2 SOIL - 21/12/2022 SE241126.039	BH19_0.2 SOIL - 21/12/2022 SE241126.040
Total Sample Weight*	g	1	**243**	**322**	**295**	**299**
Bonded ACM in >7mm Sample*	g	0.001	<0.001	<0.001	<0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
AF/FA in <2mm Sample*	g	0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	<0.001	<0.001	<0.001	<0.001
Fibre Type*	No unit	-	NAD	NAD	NAD	NAD

METHOD SUMMARY

METHOD	METHODOLOGY SUMMARY
AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free/respirable fibres which are only observed by standard trace analysis as per AN602.
AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009 and NEPM 1999 (2013) schedule B1 section 4..

FOOTNOTES

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

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

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

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

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

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

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E-MAILED
22/12 @ 1.pm

SGS

Page No: 1/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21-12-22 | Received By: | Cooling Method: ☒ Ice ☐ Icepack ☐ None | Samples intact: ☒ Yes ☐ No

Logged-in Date: | Time of Receipt: 3:00 | Cooler Sealed: ☒ Yes ☐ No ☐ N/A | Temperature: ☐ Ambient ☒ Chilled 2.1°C

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth
Company: Stantec
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au
Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935
Attached Parameter List: ☐ Yes ☐ No
Replacement Sample Containers Required: ☐ Yes ☐ No
Results Required By: Standard TAT Urgent TA requires lab approval
Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec
Contact Name: Henry Ongerth
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Phone Number: | **After Hours Phone Number:**
Fax Number: | **Email:** henry.ongerth@cardno.com.au

SGS EHS Sydney COC
SE241126

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	REG 2 NEPM Soil Characteristics
1	BH01_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar	X			X			X
	BH01_1.0	1	19/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
	BH01_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
	BH02_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
	BH02_1.0	1	19/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
	BH02_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
2	*BH03_0.3	0.3	19/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar	X	X	X				
3	*BH03_0.8-1.0	0.8-1.0	19/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar					X		
4	BH03_1.3-1.5	1.3-1.5	19/12/2022	AM/PM	Soil	Jar, ZLB						X	
5	BH04_0.2	0.2	19/12/2022	AM/PM	Soil	Jar, ZLB		X					
	BH04_0.7-1.0	0.7-1.0	19/12/2022	AM/PM	Soil	Jar, ZLB							
	BH04_1.3	1.3	19/12/2022	AM/PM	Soil	Jar, ZLB							
	*BH05_0.2-0.5	0.2-0.5	19/12/2022	AM/PM	Soil	Jar, 2xZLB							
	*BH05_0.5-0.7	0.5-0.7	19/12/2022	AM/PM	Soil	Jar, 2xZLB							
6	*BH05_1.0	1	19/12/2022	AM/PM	Soil	Jar, 2xZLB					X	X	
7	*BH05_1.5	1.5	19/12/2022	AM/PM	Soil	ZLB					X		X
8	BH06_0.2	0.2	19/12/2022	AM/PM	Soil	Jar, ZLB	X			X			
9	BH06_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB	X	X					
	BH06_1.0	1	19/12/2022	AM/PM	Soil	Jar, ZLB							
	BH06_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
	BH07_0.2	0.2	19/12/2022	AM/PM	Soil	Jar, ZLB							

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

source: Sydney.pdf page: 1 SGS Ref: SE241126_COC

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21/12 | Received By: | Cooling Method: ☐ Ice ☐ Icepack ☐ None | Samples intact: ☐ Yes ☐ No

Logged-in Date: | Time of Receipt: 7.05 | Cooler Sealed: ☐ Yes ☐ No ☐ N/A | Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	REG 2 NEPM Soil Characteristics
10	BH07_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB	X	X					
	BH07_1.0	1	19/12/2022	AM/PM	Soil	Jar, ZLB							
11	BH07_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB						X	
12	BH26_0.2	0.2	19/12/2022	AM/PM	Soil	Jar, ZLB	X			X			
	BH26_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
	QA100	0.5	19/12/2022	AM/PM	Soil	Jar							
	BH26_0.7	0.7	19/12/2022	AM/PM	Soil	Jar							
13	BH27_0.1-0.2	0.1-0.2	19/12/2022	AM/PM	Soil	ZLB, PFAS jar	X		X	X			
14	BH27_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB	X	X					
15	QA200	0.5	19/12/2022	AM/PM	Soil	Jar	X						
	BH27_1.0	1	19/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
16	BH27_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB						X	
17	*BH28_0.2	0.2	19/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar	X			X			
	BH28_0.5	0.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
18	*BH28_1.0	1	19/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar					X	X	
	BH28_1.5	1.5	19/12/2022	AM/PM	Soil	Jar, ZLB							
19	BH01_0.2	0.2	20/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar		X					
	BH02_0.1	0.1	20/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
20	BH08_0.2	0.2	20/12/2022	AM/PM	Soil	Jar, ZLB		X					
21	*BH08_0.5	0.5	20/12/2022	AM/PM	Soil	Jar, 2xZLB					X	X	
	*BH08_0.7	0.7	20/12/2022	AM/PM	Soil	Jar, 2xZLB							

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

SGS

Page No: 1/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21/12 Received By: by Cooling Method: ☐ Ice ☐ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: Time of Receipt: 3p Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

	Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	REG 2 NEPM Soil Characteristics
		*BH08_1.0	1	20/12/2022	AM/PM	Soil	Jar, ZLB, PFAS jar							
		*BH08_1.5	1.5	20/12/2022	AM/PM	Soil	Jar, 2xZLB							
22		BH14_0.2	0.2	20/12/2022	AM/PM	Soil	Jar, ZLB	X		X	X			
		*BH14_0.5	0.5	20/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar							
		BH14_0.7	0.7	20/12/2022	AM/PM	Soil	Jar, ZLB							
		*BH14_1.0	1	20/12/2022	AM/PM	Soil	Jar, 2xZLB, PFAS jar							
23		*BH14_1.3	1.3	20/12/2022	AM/PM	Soil	Jar, 2xZLB					X	X	
24		BH14_1.5	1.5	20/12/2022	AM/PM	Soil	Jar, ZLB							X
25		BH15_0.2	0.2	20/12/2022	AM/PM	Soil	Jar, ZLB	X			X			
26		QA400	0.2	20/12/2022	AM/PM	Soil	Jar	X						
27		*BH15_0.5	0.5	20/12/2022	AM/PM	Soil	Jar, 2xZLB		X					
		BH15_0.7	0.7	20/12/2022	AM/PM	Soil	Jar, ZLB							
		*BH15_1.0	1	20/12/2022	AM/PM	Soil	Jar, 2xZLB							
28		BH15_1.4	1.4	20/12/2022	AM/PM	Soil	Jar, ZLB					X		
29		BH25_0.2	0.2	20/12/2022	AM/PM	Soil	Jar, ZLB	X		X	X			
		BH25_0.5	0.5	20/12/2022	AM/PM	Soil	Jar, ZLB							
		QA300	0.5	20/12/2022	AM/PM	Soil	Jar							
		BH25_1.0	1	20/12/2022	AM/PM	Soil	Jar, ZLB							
		BH25_1.5	1.5	20/12/2022	AM/PM	Soil	Jar, ZLB							
		BH23_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, ZLB							
		BH21_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB							

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

SGS

Page No: 1/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21/12 Received By: Cooling Method: ☐ Ice ☐ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: Time of Receipt: 3pm Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	REG 2 NEPM Soil Characteristics
	BH21_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB							
30	BH21_0.8	0.8	21/12/2022	AM/PM	Soil	Jar, ZLB						X	
31	BH22_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB		X					
	BH22_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB							
	BH22_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB							
	BH22_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, ZLB							
32	BH11_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB	X			X			
	QA500	0.1	21/12/2022	AM/PM	Soil	Jar							
	BH11_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, 2xZLB							
	BH13_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, ZLB							
33	BH18_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, 2xZLB	X			X			
	BH18_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB							
	BH18_1.0	1	21/12/2022	AM/PM	Soil	Jar, 2xZLB							
	BH18_1.2	1.2	21/12/2022	AM/PM	Soil	Jar, ZLB							
34	BH20_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, ZLB		X					
	BH20_0.7	0.7	21/12/2022	AM/PM	Soil	Jar, ZLB							
	BH20_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB							
	BH20_1.3	1.3	21/12/2022	AM/PM	Soil	Jar, ZLB							
35	BH20_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, ZLB						X	
36	BH23_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB	X			X			
	BH23_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB							

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

SGS

Page No: 1/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21/12/22 Received By: BZy Cooling Method: ☐ Ice ☐ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: Time of Receipt: 3/ Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	REG 2 NEPM Soil Characteristics					
	BH23_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB												
	QA600	0.2	21/12/2022	AM/PM	Soil	Jar												
	BH13_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH13_0.7	0.7	21/12/2022	AM/PM	Soil	Jar, 2xZLB												
37	BH12_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB	X			X								
	BH12_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH12_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH12_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH10_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH10_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH10_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB												
38	BH09_0.1	0.1	21/12/2022	AM/PM	Soil	Jar, ZLB		X										
	BH09_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH09_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH09_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
39	BH24_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, 2xZLB	X			X								
	QA700	0.2	21/12/2022	AM/PM	Soil	Jar												
	BH24_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, ZLB												
	BH24_1.0	1	21/12/2022	AM/PM	Soil	Jar, 2xZLB												
40	BH19_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, ZLB	X			X								
41	BH19_0.5	0.5	21/12/2022	AM/PM	Soil	Jar, 2xZLB					X	X						

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

SGS

Page No: 1/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 21/12 Received By: Cooling Method: ☐ Ice ☐ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: Time of Receipt: 3:1 Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: TRH, BTEXN, PAH, 8Metals, PCB, OCP, OPP	asbestos (presence/absence)	PFAS (short suite)	Asbestos quantification (NEPM)	Ph/PhFOX	TRH, BTEXN, PAH, 8Metals	BTEX	REG 2 NEPM Soil Characteristics
	BH19_1.0	1	21/12/2022	AM/PM	Soil	Jar, ZLB								
	BH19_1.5	1.5	21/12/2022	AM/PM	Soil	Jar, 2xZLB								
42	BH16_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, ZLB	X	X	X					
	*BH16_0.5-0.7	0.5-0.7	21/12/2022	AM/PM	Soil	ZLB								
	BH16_0.7	0.7	21/12/2022	AM/PM	Soil	Jar, ZLB								
	*BH16_1.2-1.4	1.2-1.4	21/12/2022	AM/PM	Soil	ZLB								
	BH16_1.3	1.3	21/12/2022	AM/PM	Soil	Jar, ZLB								
43	BH17_0.2	0.2	21/12/2022	AM/PM	Soil	Jar, ZLB		X						
44	BH17_0.9	0.9	21/12/2022	AM/PM	Soil	Jar, ZLB						X		X
45	TB		lab prepared	ab prepare	Soil	vial							x	
46	TS		lab prepared	ab prepare	Soil	vial							x	

Sampled By: Henry Ongerth **Date:** 21/12/2022

Relinquished By: Michael Koerner **Date:** 22/12/2022 **Time:** 12:53 PM

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	46

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Wed 21/12/2022
Report Due	Mon 9/1/2023
SGS Reference	**SE241126**

SUBMISSION DETAILS

This is to confirm that 46 samples were received on Wednesday 21/12/2022. Results are expected to be ready by COB Monday 9/1/2023.
Please quote SGS reference SE241126 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	46 Soil	Type of documentation received	COC
Date documentation received	22/12/2022@13:00PM	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	2.1°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.
% Clay subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146.
68 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.
BH17_0.5 Extra sample received.

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

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	BH01_0.5	30	14	26	11	2	10	11	7
002	BH03_0.3	30	14	26	11	-	10	11	7
004	BH03_1.3-1.5	-	-	26	-	-	9	11	7
006	BH05_1.0	-	-	26	-	-	9	11	7
007	BH05_1.5	-	-	-	-	2	-	-	-
008	BH06_0.2	30	14	26	11	-	10	11	7
009	BH06_0.5	30	14	26	11	-	10	11	7
010	BH07_0.5	30	14	26	11	-	10	11	7
011	BH07_1.5	-	-	26	-	-	9	11	7
012	BH26_0.2	30	14	26	11	-	10	11	7
013	BH27_0.1-0.2	30	14	26	11	-	10	11	7
014	BH27_0.5	30	14	26	11	-	10	11	7
015	QA200	30	14	26	11	-	10	11	7
016	BH27_1.5	-	-	26	-	-	9	11	7
017	BH28_0.2	30	14	26	11	-	10	11	7
018	BH28_1.0	-	-	26	-	-	9	11	7
021	BH08_0.5	-	-	26	-	-	9	11	7
022	BH14_0.2	30	14	26	11	-	10	11	7
023	BH14_1.3	-	-	26	-	-	9	11	7
024	BH14_1.5	-	-	-	-	2	-	-	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
025	BH15_0.2	30	14	26	11	-	10	11	7
026	QA400	30	14	26	11	-	10	11	7
029	BH25_0.2	30	14	26	11	-	10	11	7
030	BH21_0.8	-	-	26	-	-	9	11	7
032	BH11_0.1	30	14	26	11	-	10	11	7
033	BH18_0.2	30	14	26	11	-	10	11	7
035	BH20_1.5	-	-	26	-	-	9	11	7
036	BH23_0.1	30	14	26	11	-	10	11	7
037	BH12_0.1	30	14	26	11	-	10	11	7
039	BH24_0.2	30	14	26	11	-	10	11	7
040	BH19_0.2	30	14	26	11	-	10	11	7
041	BH19_0.5	-	-	26	-	-	9	11	7
042	BH16_0.2	30	14	26	11	-	10	11	7
044	BH17_0.9	-	-	26	-	2	9	11	7
045	TB	-	-	-	-	-	-	11	-
046	TS	-	-	-	-	-	-	11	-

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Field pH for Acid Sulphate Soil	Mercury in Soil	Moisture Content	TOC in Soil	Total Recoverable Elements in Soil/Waste
001	BH01_0.5	13	2	-	1	1	1	8
002	BH03_0.3	-	2	-	1	1	-	7
003	BH03_0.8-1.0	-	-	4	-	-	-	-
004	BH03_1.3-1.5	-	-	-	1	1	-	7
005	BH04_0.2	-	2	-	-	-	-	-
006	BH05_1.0	-	-	4	1	1	-	7
007	BH05 1.5	13	-	4	-	1	1	1
008	BH06_0.2	-	2	-	1	1	-	7
009	BH06_0.5	-	2	-	1	1	-	7
010	BH07_0.5	-	2	-	1	1	-	7
011	BH07_1.5	-	-	-	1	1	-	7
012	BH26_0.2	-	2	-	1	1	-	7
013	BH27_0.1-0.2	-	2	-	1	1	-	7
014	BH27_0.5	-	2	-	1	1	-	7
015	QA200	-	-	-	1	1	-	7
016	BH27_1.5	-	-	-	1	1	-	7
017	BH28_0.2	-	2	-	1	1	-	7
018	BH28_1.0	-	-	4	1	1	-	7
019	BH01_0.2	-	2	-	-	-	-	-
020	BH08 0.2	-	2	-	-	-	-	-
021	BH08_0.5	-	-	4	1	1	-	7
022	BH14_0.2	-	2	-	1	1	-	7
023	BH14_1.3	-	-	4	1	1	-	7
024	BH14_1.5	13	-	-	-	1	1	1

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Exchangeable Cations and Cation Exchange Capacity	Fibre Identification in soil	Field pH for Acid Sulphate Soil	Mercury in Soil	Moisture Content	TOC in Soil	Total Recoverable Elements in Soil/Waste
025	BH15_0.2	-	2	-	1	1	-	7
026	QA400	-	-	-	1	1	-	7
027	BH15_0.5	-	2	-	-	-	-	-
028	BH15_1.4	-	-	4	-	-	-	-
029	BH25_0.2	-	2	-	1	1	-	7
030	BH21_0.8	-	-	-	1	1	-	7
031	BH22_0.1	-	2	-	-	-	-	-
032	BH11_0.1	-	2	-	1	1	-	7
033	BH18_0.2	-	2	-	1	1	-	7
034	BH20_0.2	-	2	-	-	-	-	-
035	BH20_1.5	-	-	-	1	1	-	7
036	BH23_0.1	-	2	-	1	1	-	7
037	BH12_0.1	-	2	-	1	1	-	7
038	BH09_0.1	-	2	-	-	-	-	-
039	BH24_0.2	-	2	-	1	1	-	7
040	BH19_0.2	-	2	-	1	1	-	7
041	BH19_0.5	-	-	4	1	1	-	7
042	BH16_0.2	-	2	-	1	1	-	7
043	BH17_0.2	-	2	-	-	-	-	-
044	BH17_0.9	13	-	-	1	1	1	8
045	TB	-	-	-	-	1	-	-

CONTINUED OVERLEAF

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SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Gravimetric Determination of Asbestos in Soil	Particle sizing of soils <75µm by hydrometer	Particle sizing of soils by sieving	Per- and Polyfluoroalkyl Substances (PFAS) in
001	BH01_0.5	9	1	2	-
002	BH03_0.3	-	-	-	23
007	BH05_1.5	-	1	2	-
008	BH06_0.2	9	-	-	-
012	BH26_0.2	9	-	-	-
013	BH27_0.1-0.2	9	-	-	23
017	BH28_0.2	9	-	-	-
022	BH14_0.2	9	-	-	23
024	BH14_1.5	-	1	2	-

CONTINUED OVERLEAF

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Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE241126

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Gravimetric Determination of Asbestos in Soil	Particle sizing of soils <75µm by hydrometer	Particle sizing of soils by sieving	Per- and Polyfluoroalkyl Substances (PFAS) in
025	BH15_0.2	9	-	-	-
029	BH25_0.2	9	-	-	23
032	BH11_0.1	9	-	-	-
033	BH18_0.2	9	-	-	-
036	BH23_0.1	9	-	-	-
037	BH12_0.1	9	-	-	-
039	BH24_0.2	9	-	-	-
040	BH19_0.2	9	-	-	-
042	BH16_0.2	-	-	-	23
044	BH17_0.9	-	1	2	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
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Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Admin	Manager	Anthony Nilsson
Client	SGS I&E SYDNEY	Laboratory	SGS Cairns Environmental
Address	5058 201 I&E HSE SYDNEY (EX 5258) UNIT 16 33 MADDOX STREET ALEXANDRIA NSW 2015	Address	Unit 2, 58 Comport St Portsmith QLD 4870
Telephone	0285940400	Telephone	+61 07 4035 5111
Facsimile	0285940499	Facsimile	+61 07 4035 5122
Email	au.environmental.sydney@sgs.com	Email	AU.Environmental.Cairns@sgs.com
Project	**304100928**	SGS Reference	**CE163795 R0**
Order Number	**SE241126**	Date Received	04 Jan 2023
Samples	4	Date Reported	10 Jan 2023

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

SIGNATORIES

Anthony NILSSON
Operations Manager

Jon DICKER
Manager Northern QLD

Parameter	Units	LOR	Sample Number: CE163795.001 Sample Matrix: Soil Sample Date: 19 Dec 2022 Sample Name: SE241126.001
Moisture Content Method: AN002 Tested: 4/1/2023			
% Moisture	%w/w	1	**6.4**
Particle sizing of soils by sieving Method: AN005 Tested: 6/1/2023			
Passing 75µm	%w/w	1	**31**
Retained 75µm	%w/w	1	**70**
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 5/1/2023			
Clay (<0.002mm)	%w/w	0.1	**5.0**

Parameter	Units	LOR	Sample Number CE163795.007 Sample Matrix Soil Sample Date 19 Dec 2022 Sample Name SE241126.007
Moisture Content Method: AN002 Tested: 4/1/2023			
% Moisture	%w/w	1	**13**
Particle sizing of soils by sieving Method: AN005 Tested: 6/1/2023			
Passing 75µm	%w/w	1	**53**
Retained 75µm	%w/w	1	**47**
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 5/1/2023			
Clay (<0.002mm)	%w/w	0.1	**20**

Parameter	Units	LOR	Sample Number: CE163795.024 Sample Matrix: Soil Sample Date: 20 Dec 2022 Sample Name: SE241126.024
Moisture Content Method: AN002 Tested: 4/1/2023			
% Moisture	%w/w	1	**7.9**
Particle sizing of soils by sieving Method: AN005 Tested: 6/1/2023			
Passing 75µm	%w/w	1	**38**
Retained 75µm	%w/w	1	**62**
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 5/1/2023			
Clay (<0.002mm)	%w/w	0.1	**5.0**

Parameter	Units	LOR	Sample Number: CE163795.044 Sample Matrix: Soil Sample Date: 21 Dec 2022 Sample Name: SE241126.044
Moisture Content Method: AN002 Tested: 4/1/2023			
% Moisture	%w/w	1	**7.4**
Particle sizing of soils by sieving Method: AN005 Tested: 6/1/2023			
Passing 75µm	%w/w	1	**23**
Retained 75µm	%w/w	1	**78**
Particle sizing of soils <75µm by hydrometer Method: AN005 Tested: 5/1/2023			
Clay (<0.002mm)	%w/w	0.1	**4.0**

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

No QC samples were reported for this job.

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN005	The particle size distribution of a soil is determined by wet sieving, using a maximum of 900 mL of deionised water to sieve all fractions down to 75 µm. Referenced to AS1289.3.6.1 and AS1141.11.
AN005	Following wet sieving of the sample,(particles smaller than 75 µm) a dispersing solution is added and a hydrometer is used to measure sedimentation. Soil density is determined and the percentage of each size fraction calculated. Referenced to AS1289.3.6.3.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

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

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

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

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

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

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

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

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

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	46

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE241126A R0**
Date Received	23/1/2023
Date Reported	31/1/2023

COMMENTS

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

SIGNATORIES



Akheeqar BENIAMEEN
Chemist



Ly Kim HA
Organic Section Head



Shane MCDERMOTT
Inorganic/Metals Chemist

TRH Silica Gel (Total Recoverable Hydrocarbons - Silica Gel) in Soil [AN403] Tested: 23/1/2023

PARAMETER	UOM	LOR	BH15_0.2 SOIL - 20/12/2022 SE241126A.025
TRH C10-C14-Silica	mg/kg	20	<20
TRH C15-C28-Silica	mg/kg	45	<45
TRH C29-C36-Silica	mg/kg	45	<45
TRH C37-C40-Silica	mg/kg	100	<100
TRH >C10-C16-Silica	mg/kg	25	<25
TRH >C10-C16-Silica minus Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34-Silica (F3)	mg/kg	90	<90
TRH >C34-C40-Silica (F4)	mg/kg	120	<120
TRH C10-C36-Silica	mg/kg	110	<110

METHOD	METHODOLOGY SUMMARY
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-silica) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken . This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup /fractionation techniques. Reference USEPA 3510B, 8015B

FOOTNOTES

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

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

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

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Note that in terms of units of radioactivity:

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

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

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Hi GBS team.

Please book this in on standard TAT.
Thanks,

Matthew Tyler
Environment, Health & Safety
Client Services

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015

From: Henry Ongerth <henry.ongerth@cardno.com.au>
Sent: Monday, 23 January 2023 1:29 PM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Subject: [EXTERNAL] RE: Report Job SE241126, your reference 304100928, order number 304100928

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

Hi SGS,

Can I please request that you perform a silica gel cleanup on sample ID: BH15_0.2

Kind regards,

Henry Ongerth
Graduate Engineer - Rotation Program

henry.ongerth@cardno.com.au

Stantec Australia
Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia





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From: AU.Environmental.Sydney@SGS.com <AU.Environmental.Sydney@SGS.com>
Sent: Friday, 13 January 2023 5:40 PM
To: Henry Ongerth <henry.ongerth@cardno.com.au>
Subject: Report Job SE241126, your reference 304100928, order number 304100928

Dear Valued Customer,

Please find attached the report for SGS job SE241126, your reference 304100928, order number 304100928.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288 R0**
Date Received	25/1/2023
Date Reported	3/2/2023

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Akheeqar BENIAMEEN	**Bennet LO**	**Ravee SIVASUBRAMANIAM**	**Shane MCDERMOTT**
Chemist	Senior Chemist	Hygiene Team Leader	Inorganic/Metals Chemist

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 30/1/2023

PARAMETER	UOM	LOR	HA109-0.1 SOIL - 25/1/2023 SE242288.010	HA110-0.1 SOIL - 25/1/2023 SE242288.011	HA111-0.1 SOIL - 25/1/2023 SE242288.012	HA112-0.1 SOIL - 25/1/2023 SE242288.013	QA200 SOIL - 25/1/2023 SE242288.014
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 30/1/2023

PARAMETER	UOM	LOR	HA109-0.1 SOIL - 25/1/2023 SE242288.010	HA110-0.1 SOIL - 25/1/2023 SE242288.011	HA111-0.1 SOIL - 25/1/2023 SE242288.012	HA112-0.1 SOIL - 25/1/2023 SE242288.013	QA200 SOIL - 25/1/2023 SE242288.014
TRH C10-C14	mg/kg	20	**39**	<20	**29**	**25**	**27**
TRH C15-C28	mg/kg	45	**160**	**64**	**150**	**110**	**150**
TRH C29-C36	mg/kg	45	**74**	**47**	**93**	**71**	**73**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	**50**	<25	**39**	**34**	**38**
TRH >C16-C34 (F3)	mg/kg	90	**210**	**97**	**210**	**160**	**200**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**270**	**110**	**270**	**210**	**250**
TRH >C10-C40 Total (F bands)	mg/kg	210	**260**	<210	**250**	<210	**240**

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 30/1/2023

PARAMETER	UOM	LOR	HA101-0.1 SOIL - 25/1/2023 SE242288.001	HA102-0.1 SOIL - 25/1/2023 SE242288.002	HA103-0.1 SOIL - 25/1/2023 SE242288.003	HA104-0.1 SOIL - 25/1/2023 SE242288.004	HA105-0.1 SOIL - 25/1/2023 SE242288.005
Lead, Pb	mg/kg	1	19	970	2500	390	140
Zinc, Zn	mg/kg	2	44	870	1900	910	180

PARAMETER	UOM	LOR	HA106-0.1 SOIL - 25/1/2023 SE242288.006	QA100 SOIL - 25/1/2023 SE242288.007	HA107-0.1 SOIL - 25/1/2023 SE242288.008	HA108-0.1 SOIL - 25/1/2023 SE242288.009	HA109-0.1 SOIL - 25/1/2023 SE242288.010
Lead, Pb	mg/kg	1	190	170	160	310	310
Zinc, Zn	mg/kg	2	170	190	180	220	200

PARAMETER	UOM	LOR	HA110-0.1 SOIL - 25/1/2023 SE242288.011	HA111-0.1 SOIL - 25/1/2023 SE242288.012	HA112-0.1 SOIL - 25/1/2023 SE242288.013	QA200 SOIL - 25/1/2023 SE242288.014	HA113-0.1 SOIL - 25/1/2023 SE242288.015
Lead, Pb	mg/kg	1	200	530	300	290	44
Zinc, Zn	mg/kg	2	140	310	210	190	190

PARAMETER	UOM	LOR	HA114-0.1 SOIL - 25/1/2023 SE242288.016	HA115-0.1 SOIL - 25/1/2023 SE242288.017	HA116-0.1 SOIL - 25/1/2023 SE242288.018
Lead, Pb	mg/kg	1	21	19	110
Zinc, Zn	mg/kg	2	82	58	430

Moisture Content [AN002] Tested: 30/1/2023

PARAMETER	UOM	LOR	HA101-0.1 SOIL - 25/1/2023 SE242288.001	HA102-0.1 SOIL - 25/1/2023 SE242288.002	HA103-0.1 SOIL - 25/1/2023 SE242288.003	HA104-0.1 SOIL - 25/1/2023 SE242288.004	HA105-0.1 SOIL - 25/1/2023 SE242288.005
% Moisture	%w/w	1	5.1	11.6	16.3	29.7	16.3

PARAMETER	UOM	LOR	HA106-0.1 SOIL - 25/1/2023 SE242288.006	QA100 SOIL - 25/1/2023 SE242288.007	HA107-0.1 SOIL - 25/1/2023 SE242288.008	HA108-0.1 SOIL - 25/1/2023 SE242288.009	HA109-0.1 SOIL - 25/1/2023 SE242288.010
% Moisture	%w/w	1	15.2	16.6	10.6	9.3	19.7

PARAMETER	UOM	LOR	HA110-0.1 SOIL - 25/1/2023 SE242288.011	HA111-0.1 SOIL - 25/1/2023 SE242288.012	HA112-0.1 SOIL - 25/1/2023 SE242288.013	QA200 SOIL - 25/1/2023 SE242288.014	HA113-0.1 SOIL - 25/1/2023 SE242288.015
% Moisture	%w/w	1	18.9	18.4	20.3	19.7	10.6

PARAMETER	UOM	LOR	HA114-0.1 SOIL - 25/1/2023 SE242288.016	HA115-0.1 SOIL - 25/1/2023 SE242288.017	HA116-0.1 SOIL - 25/1/2023 SE242288.018
% Moisture	%w/w	1	23.2	16.2	15.2

Fibre Identification in soil [AS4964/AN602] Tested: 2/2/2023

PARAMETER	UOM	LOR	HA101-0.1 SOIL - 25/1/2023 SE242288.001	HA102-0.1 SOIL - 25/1/2023 SE242288.002	HA103-0.1 SOIL - 25/1/2023 SE242288.003	HA104-0.1 SOIL - 25/1/2023 SE242288.004	HA105-0.1 SOIL - 25/1/2023 SE242288.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	HA106-0.1 SOIL - 25/1/2023 SE242288.006	HA107-0.1 SOIL - 25/1/2023 SE242288.008	HA108-0.1 SOIL - 25/1/2023 SE242288.009	HA109-0.1 SOIL - 25/1/2023 SE242288.010	HA110-0.1 SOIL - 25/1/2023 SE242288.011
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	HA111-0.1 SOIL - 25/1/2023 SE242288.012	HA112-0.1 SOIL - 25/1/2023 SE242288.013	HA113-0.1 SOIL - 25/1/2023 SE242288.015	HA114-0.1 SOIL - 25/1/2023 SE242288.016	HA115-0.1 SOIL - 25/1/2023 SE242288.017
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

PARAMETER	UOM	LOR	HA116-0.1 SOIL - 25/1/2023 SE242288.018
Asbestos Detected	No unit	-	No
Estimated Fibres*	%w/w	0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN433	VOCs and C6-C9/C6-C10 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE242288 R0

CLIENT DETAILS

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Project	**304100928**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

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SGS Reference	**SE242288 R0**
Date Received	25 Jan 2023
Date Reported	03 Feb 2023

COMMENTS

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

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

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	18 Soil	Type of documentation received	COC
Date documentation received	25/1/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE242288 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Fibre Identification in soil

Method: ME-(AU)-[ENV]AS4964/AN602

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA101-0.1	SE242288.001	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA102-0.1	SE242288.002	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA103-0.1	SE242288.003	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA104-0.1	SE242288.004	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA105-0.1	SE242288.005	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA106-0.1	SE242288.006	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA107-0.1	SE242288.008	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA108-0.1	SE242288.009	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA109-0.1	SE242288.010	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA110-0.1	SE242288.011	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA111-0.1	SE242288.012	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA112-0.1	SE242288.013	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA113-0.1	SE242288.015	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA114-0.1	SE242288.016	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA115-0.1	SE242288.017	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023
HA116-0.1	SE242288.018	LB270345	25 Jan 2023	25 Jan 2023	25 Jan 2024	02 Feb 2023	25 Jan 2024	03 Feb 2023

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA101-0.1	SE242288.001	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA102-0.1	SE242288.002	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA103-0.1	SE242288.003	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA104-0.1	SE242288.004	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA105-0.1	SE242288.005	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA106-0.1	SE242288.006	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
QA100	SE242288.007	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA107-0.1	SE242288.008	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA108-0.1	SE242288.009	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA109-0.1	SE242288.010	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA110-0.1	SE242288.011	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA111-0.1	SE242288.012	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA112-0.1	SE242288.013	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
QA200	SE242288.014	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA113-0.1	SE242288.015	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA114-0.1	SE242288.016	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA115-0.1	SE242288.017	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023
HA116-0.1	SE242288.018	LB269978	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	04 Feb 2023	02 Feb 2023

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA101-0.1	SE242288.001	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA102-0.1	SE242288.002	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA103-0.1	SE242288.003	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA104-0.1	SE242288.004	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA105-0.1	SE242288.005	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA106-0.1	SE242288.006	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
QA100	SE242288.007	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA107-0.1	SE242288.008	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA108-0.1	SE242288.009	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA109-0.1	SE242288.010	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA110-0.1	SE242288.011	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA111-0.1	SE242288.012	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA112-0.1	SE242288.013	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
QA200	SE242288.014	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA113-0.1	SE242288.015	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA114-0.1	SE242288.016	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA115-0.1	SE242288.017	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023
HA116-0.1	SE242288.018	LB269973	25 Jan 2023	25 Jan 2023	24 Jul 2023	30 Jan 2023	24 Jul 2023	02 Feb 2023

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref

HOLDING TIME SUMMARY

SE242288 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

TRH (Total Recoverable Hydrocarbons) in Soil (continued) — **Method: ME-(AU)-[ENV]AN403**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA109-0.1	SE242288.010	LB269959	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	11 Mar 2023	02 Feb 2023
HA110-0.1	SE242288.011	LB269959	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	11 Mar 2023	02 Feb 2023
HA111-0.1	SE242288.012	LB269959	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	11 Mar 2023	02 Feb 2023
HA112-0.1	SE242288.013	LB269959	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	11 Mar 2023	02 Feb 2023
QA200	SE242288.014	LB269959	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	11 Mar 2023	02 Feb 2023

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA109-0.1	SE242288.010	LB269964	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	08 Feb 2023	01 Feb 2023
HA110-0.1	SE242288.011	LB269964	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	08 Feb 2023	01 Feb 2023
HA111-0.1	SE242288.012	LB269964	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	08 Feb 2023	01 Feb 2023
HA112-0.1	SE242288.013	LB269964	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	08 Feb 2023	01 Feb 2023
QA200	SE242288.014	LB269964	25 Jan 2023	25 Jan 2023	08 Feb 2023	30 Jan 2023	08 Feb 2023	01 Feb 2023

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

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

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	HA109-0.1	SE242288.010	%	60 - 130%	84
	HA110-0.1	SE242288.011	%	60 - 130%	92
	HA111-0.1	SE242288.012	%	60 - 130%	82
	HA112-0.1	SE242288.013	%	60 - 130%	86
	QA200	SE242288.014	%	60 - 130%	73
d4-1,2-dichloroethane (Surrogate)	HA109-0.1	SE242288.010	%	60 - 130%	87
	HA110-0.1	SE242288.011	%	60 - 130%	74
	HA111-0.1	SE242288.012	%	60 - 130%	81
	HA112-0.1	SE242288.013	%	60 - 130%	67
	QA200	SE242288.014	%	60 - 130%	70
d8-toluene (Surrogate)	HA109-0.1	SE242288.010	%	60 - 130%	74
	HA110-0.1	SE242288.011	%	60 - 130%	90
	HA111-0.1	SE242288.012	%	60 - 130%	73
	HA112-0.1	SE242288.013	%	60 - 130%	74
	QA200	SE242288.014	%	60 - 130%	67

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

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

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

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

Sample Number	Parameter	Units	LOR	Result
LB269973.001	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB269959.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB269964.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	80

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242288.010	LB269978.011	% Moisture	%w/w	1	19.7	21.9	35	11
SE242289.002	LB269978.022	% Moisture	%w/w	1	19.436052366	18.496538081	35	5

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242288.010	LB269973.014	Lead, Pb	mg/kg	1	310	320	30	5
		Zinc, Zn	mg/kg	2	200	220	31	6

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242316.001	LB269959.014		TRH C10-C14	mg/kg	20	73	80	56	9
			TRH C15-C28	mg/kg	45	340	310	44	10
			TRH C29-C36	mg/kg	45	170	180	56	10
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	580	570	49	1
			TRH >C10-C40 Total (F bands)	mg/kg	210	540	530	69	2
		TRH F Bands	TRH >C10-C16	mg/kg	25	100	110	53	5
			TRH >C16-C34 (F3)	mg/kg	90	440	420	51	4
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242316.001	LB269964.016		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	7.1	6.8	30	5
			d8-toluene (Surrogate)	mg/kg	-	8.8	7.9	30	10
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.6	9.7	30	9
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

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

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB269973.002	Lead, Pb	mg/kg	1	94	89.9	80 - 120	105
	Zinc, Zn	mg/kg	2	290	273	80 - 120	107

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB269959.002		TRH C10-C14	mg/kg	20	48	40	60 - 140	120
		TRH C15-C28	mg/kg	45	47	40	60 - 140	117
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	83
	TRH F Bands	TRH >C10-C16	mg/kg	25	48	40	60 - 140	121
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	107
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	77

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB269964.002		TRH C6-C10	mg/kg	25	69	92.5	60 - 140	74
		TRH C6-C9	mg/kg	20	61	80	60 - 140	76
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	8.7	10	70 - 130	87
		Bromofluorobenzene (Surrogate)	mg/kg	-	10.5	10	70 - 130	105
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	38	62.5	60 - 140	61

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

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

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242288.001	LB269973.004	Lead, Pb	mg/kg	1	63	19	50	89
		Zinc, Zn	mg/kg	2	100	44	50	113

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242288.010	LB269959.004		TRH C10-C14	mg/kg	20	94	39	40	136
			TRH C15-C28	mg/kg	45	200	160	40	111
			TRH C29-C36	mg/kg	45	110	74	40	87
			TRH C37-C40	mg/kg	100	<100	<100	-	-
			TRH C10-C36 Total	mg/kg	110	410	270	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	350	260	-	-
		TRH F	TRH >C10-C16	mg/kg	25	110	50	40	139
		Bands	TRH >C16-C34 (F3)	mg/kg	90	240	210	40	89
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE242288.010	LB269964.018		TRH C6-C10	mg/kg	25	96	<25	92.5	102
			TRH C6-C9	mg/kg	20	83	<20	80	102
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.7	8.7	10	107
			d8-toluene (Surrogate)	mg/kg	-	10.6	7.4	10	106
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.0	8.4	-	100
		VPH F	Benzene (F0)	mg/kg	0.1	5.3	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	66	<25	62.5	102

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	16

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288 R0**
Date Received	25 Jan 2023
Date Reported	03 Feb 2023

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Asbestos analysed by Approved Identifier Ravee Sivasubramaniam

SIGNATORIES

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre Identification in soil — Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE242288.001	HA101-0.1	Soil	307g Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.002	HA102-0.1	Soil	193g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.003	HA103-0.1	Soil	156g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.004	HA104-0.1	Soil	162g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.005	HA105-0.1	Soil	117g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.006	HA106-0.1	Soil	196g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE242288.008	HA107-0.1	Soil	186g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE242288.009	HA108-0.1	Soil	215g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.010	HA109-0.1	Soil	193g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.011	HA110-0.1	Soil	165g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.012	HA111-0.1	Soil	177g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE242288.013	HA112-0.1	Soil	198g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.015	HA113-0.1	Soil	245g Clay, Sand, Soil, Rocks	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.016	HA114-0.1	Soil	234g Clay, Soil	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg	<0.01
SE242288.017	HA115-0.1	Soil	149g Clay, Sand, Soil, Rocks, Plant Matter	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	<0.01
SE242288.018	HA116-0.1	Soil	269g Clay, Soil	25 Jan 2023	No Asbestos Found at RL of 0.1g/kg	<0.01

METHOD SUMMARY

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

FOOTNOTES

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

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

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

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

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

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

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source: Sydney.pdf page: 1 SGS Ref: SE242288.COC

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 25-1-23 | Received By: | Cooling Method: ☐ Ice ☐ Icepack ☒ None | Samples intact: ☒ Yes ☐ No

Logged-in Date: | Time of Receipt: 5:25 | Cooler Sealed: ☒ Yes ☐ No ☐ N/A | Temperature: ☒ Ambient ☐ Chilled 23.5

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth
Company: Stantec
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au
Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935
Attached Parameter List: ☐ Yes ☐ No
Replacement Sample Containers Required: ☐ Yes ☐ No
Results Required By: Standard TAT Urgent TA requires lab approval
Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | PO No.: | Project No.: 304100928

Company Name: Stantec
Contact Name: Henry Ongerth
Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia
Phone Number: 0421324022 | After Hours Phone Number:
Fax Number: | Email: henry.ongerth@cardno.com.au

SGS EHS Sydney COC
SE242288

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.
Indicate results format (please check one): Email ☒ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	TRH						
1	HA101-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
2	HA102-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
	HA102-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
3	HA103-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
	HA103-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
4	HA104-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
	HA104-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
5	HA105-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
	HA105-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
6	HA106-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
7	QA100	0.1	25/01/2023	AM/PM	Soil	Jar	X	X										
	HA106-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X			X							
8	HA107-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
9	HA108-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X									
	HA108-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
10	HA109-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X			X						
	HA109-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
11	HA110-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X			X						
	HA110-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							
12	HA111-0.1	0.1	25/01/2023	AM/PM	Soil	Jar,Zlb	X	X	X			X						
	HA111-0.3	0.3	25/01/2023	AM/PM	Soil	Jar,Zlb					X							

Sampled By: Henry Ongerth and Claire Corbett Date: 25/01/2023

Relinquished By: Henry Ongerth Henry Ongerth Date: 25/01/23 Time: 5:22 pm

SGS

Page No: 2/2

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 25.1.23 | Received By: [redacted] | Cooling Method: ☐ Ice ☐ Icepack ☐ None | Samples intact: ☑ Yes ☐ No

Logged-in Date: | Time of Receipt: 5:25 | Cooler Sealed: ☑ Yes ☐ No ☐ N/A | Temperature: ☑ Ambient ☐ Chilled 36.1

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information		PO No.:	Project No.: 304100928
Company Name:	Stantec		
Contact Name:	Henry Ongerth		
Address:	Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia		
Phone Number:	0421324022	After Hours Phone Number:	
Fax Number:		Email:	henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☒ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	TRH
13	HA112-0.1	0.1	25/01/2023	AM/PM	Soil	Jar, zlb	X	X	X			X
14	[redacted] QA200	0.1	25/01/2023	AM/PM	Soil	Jar	X	X	[redacted]			X
	HA112-0.3	0.3	25/01/2023	AM/PM	Soil	Jar, zlb					X	
15	HA113-0.1	0.1	25/01/2023	AM/PM	Soil	Jar, zlb	X	X	X			
16	HA114-0.1	0.1	25/01/2023	AM/PM	Soil	Jar, zlb	X	X	X			
	HA114-0.3	0.3	25/01/2023	AM/PM	Soil	Jar, zlb					X	
17	HA115-0.1	0.1	25/01/2023	AM/PM	Soil	Jar, zlb	X	X	X			
	HA115-0.3	0.3	25/01/2023	AM/PM	Soil	Jar, zlb					X	
18	HA116-0.1	0.1	25/01/2023	AM/PM	Soil	Jar, zlb	X	X	X			
	HA116-0.3	0.3	25/01/2023	AM/PM	Soil	Jar, zlb					X	
19	RIN 100		25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							
			25/01/2023	AM/PM	Soil							

Sampled By: Henry Ongerth and Claire Corbett Date: 25/01/2023

Relinquished By: Henry Ongerth Henry Ongerth Date: 25/01/23 Time: 5:22 pm

SAMPLE RECEIPT ADVICE

SE242288

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Wed 25/1/2023
Report Due	Fri 3/2/2023
SGS Reference	**SE242288**

SUBMISSION DETAILS

This is to confirm that 19 samples were received on Wednesday 25/1/2023. Results are expected to be ready by COB Friday 3/2/2023. Please quote SGS reference SE242288 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	18 Soil	Type of documentation received	COC
Date documentation received	25/1/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

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

COMMENTS

14 soil samples have been placed on hold as no tests have been assigned for them by the client. These samples will not be processed.

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SAMPLE RECEIPT ADVICE

SE242288

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil	Moisture Content	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	Volatile Petroleum Hydrocarbons in Soil
001	HA101-0.1	2	1	2	-	-
002	HA102-0.1	2	1	2	-	-
003	HA103-0.1	2	1	2	-	-
004	HA104-0.1	2	1	2	-	-
005	HA105-0.1	2	1	2	-	-
006	HA106-0.1	2	1	2	-	-
007	QA100	-	1	2	-	-
008	HA107-0.1	2	1	2	-	-
009	HA108-0.1	2	1	2	-	-
010	HA109-0.1	2	1	2	9	7
011	HA110-0.1	2	1	2	9	7
012	HA111-0.1	2	1	2	9	7
013	HA112-0.1	2	1	2	9	7
014	QA200	-	1	2	9	7
015	HA113-0.1	2	1	2	-	-
016	HA114-0.1	2	1	2	-	-
017	HA115-0.1	2	1	2	-	-
018	HA116-0.1	2	1	2	-	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288A R0**
Date Received	6/2/2023
Date Reported	13/2/2023

COMMENTS

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

SIGNATORIES

Bennet LO
Senior Chemist

Shane MCDERMOTT
Inorganic/Metals Chemist

TCLP (Toxicity Characteristic Leaching Procedure) for Metals [AN006] Tested: 10/2/2023

PARAMETER	UOM	LOR	HA103-0.1 SOIL - 25/1/2023 SE242288A.003
pH 1:20	pH Units	-	**6.0**
pH 1:20 plus HCL	pH Units	-	**2.3**
Extraction Solution Used	No unit	-	**1**
Mass of Sample Used*	g	-	**13**
Volume of ExtractionSolution Used*	mL	-	**250**
pH TCLP after 18 hours	pH Units	-	**5.0**

Metals in TCLP Extract by ICPOES [AN320] Tested: 13/2/2023

PARAMETER	UOM	LOR	HA103-0.1 SOIL - 25/1/2023 SE242288A.003
Lead, Pb	mg/L	0.02	**2.1**
Zinc, Zn	mg/L	0.01	**19**

METHOD	METHODOLOGY SUMMARY
AN006	Contaminants of interest in a waste material are leached out of the waste with a selected leaching solution under controlled conditions. The ratio of sample to extraction fluid is 100g to 2L (1 to 20 by mass). The concentration of each contaminant of interest is determined in the leachate by appropriate methods after separation from the sample by filtering. Base on USEPA 1311.
AN006	Extraction Fluid #1: This fluid is made by combining 128.6mL of dilute sodium hydroxide solution and 11.5mL glacial acetic acid with water and diluting to a volume of 2 litres. The pH of this fluid should be 4.93 ± 0.05.
AN006	Extraction Fluid #2: This fluid is made by diluting 5.7mL glacial acetic acid with water to a volume of 1 litre. The pH of this fluid should be 2.88 ± 0.05.
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN320	Metals by ICP-OES: Samples are preserved with 10% nitric acid for a wide range of metals and some non-metals. This solution is measured by Inductively Coupled Plasma. Solutions are aspirated into an argon plasma at 8000-10000K and emit characteristic energy or light as a result of electron transitions through unique energy levels. The emitted light is focused onto a diffraction grating where it is separated into components .
AN320	Photomultipliers or CCDs are used to measure the light intensity at specific wavelengths. This intensity is directly proportional to concentration. Corrections are required to compensate for spectral overlap between elements . Reference APHA 3120 B.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE242288A R0

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288A R0**
Date Received	06 Feb 2023
Date Reported	13 Feb 2023

COMMENTS

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

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

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	1 Soil	Type of documentation received	Email
Date documentation received	6/2/2023@3:19pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE242288A R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Metals in TCLP Extract by ICPOES — **Method: ME-(AU)-[ENV]AN320**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA103-0.1	SE242288A.003	LB271189	25 Jan 2023	06 Feb 2023	24 Jul 2023	13 Feb 2023	24 Jul 2023	13 Feb 2023

TCLP (Toxicity Characteristic Leaching Procedure) for Metals — **Method: ME-(AU)-[ENV]AN006**

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA103-0.1	SE242288A.003	LB271145	25 Jan 2023	06 Feb 2023	24 Jul 2023	10 Feb 2023	14 Feb 2023	13 Feb 2023

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

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

No surrogates were required for this job.

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

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

Metals in TCLP Extract by ICPOES — **Method: ME-(AU)-[ENV]AN320**

Sample Number	Parameter	Units	LOR	Result
LB271189.001	Lead, Pb	mg/L	0.02	<0.02
	Zinc, Zn	mg/L	0.01	<0.01

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

No duplicates were required for this job.

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

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

Metals in TCLP Extract by ICPOES — **Method: ME-(AU)-[ENV]AN320**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB271189.002	Lead, Pb	mg/L	0.02	0.49	0.5	80 - 120	99
	Zinc, Zn	mg/L	0.01	0.50	0.5	80 - 120	100

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

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

No matrix spikes were required for this job.

MATRIX SPIKE DUPLICATES

SE242288A R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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

Hi GBS team,

Please book in as below, standard TAT, thanks.

Kind Regards,

Huong Crawford
Industries & Environment
Production Manager

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Phone: +61 (0)2 8594 0403
Fax: + 61 (0)2 8594 0499
E-mail: Huong.Crawford@sgs.com
Web: www.au.sgs.com

View Your Results Online: engage.sgs.com

From: Henry Ongerth <henry.ongerth@cardno.com.au>
Sent: Monday, 6 February 2023 4:15 PM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Cc: AU.SampleReceipt.Sydney, AU (Sydney) <AU.SampleReceipt.Sydney@sgs.com>
Subject: RE: [EXTERNAL] RE: Report Job SE242288, your reference 304100928, order number 304100928

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

Hi Huong,

TCLP lead and zinc please.

Thanks,

Henry Ongerth
Graduate Engineer - Rotation Program

henry.ongerth@cardno.com.au

Stantec Australia
Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Stantec

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Please consider the environment before printing this email.

From: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Sent: Monday, 6 February 2023 3:25 PM
To: Henry Ongerth <henry.ongerth@cardno.com.au>
Cc: AU.SampleReceipt.Sydney, AU (Sydney) <AU.SampleReceipt.Sydney@sgs.com>
Subject: RE: [EXTERNAL] RE: Report Job SE242288, your reference 304100928, order number 304100928

Hi Henry,

Can you please let us know the testing required for TCLP? Eg. TCLP 8 heavy metals, TCLP lead, TCLP PAH…, thanks.

Kind Regards,

Huong Crawford
Industries & Environment
Production Manager

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Phone: +61 (0)2 8594 0403
Fax: + 61 (0)2 8594 0499
E-mail: Huong.Crawford@sgs.com
Web: www.au.sgs.com

View Your Results Online: engage.sgs.com

From: Henry Ongerth <henry.ongerth@cardno.com.au>
Sent: Monday, 6 February 2023 3:19 PM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@SGS.com>
Subject: [EXTERNAL] RE: Report Job SE242288, your reference 304100928, order number 304100928

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

Hi SGS,

Can I please get some TCLP testing done on HA103_0.1, standard TAT.

Thanks very much.

Kind regards,

Henry Ongerth
Graduate Engineer - Rotation Program

henry.ongerth@cardno.com.au

Stantec Australia
Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia





Stantec acknowledges the Traditional Owners of Country throughout Australia and recognises their continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

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Please consider the environment before printing this email.

From: AU.Environmental.Sydney@SGS.com <AU.Environmental.Sydney@SGS.com>
Sent: Friday, 3 February 2023 4:54 PM
To: Henry Ongerth <henry.ongerth@cardno.com.au>
Subject: Report Job SE242288, your reference 304100928, order number 304100928

Dear Valued Customer,

Please find attached the report for SGS job SE242288, your reference 304100928, order number 304100928.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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SAMPLE RECEIPT ADVICE

SE242288A

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	19

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 6/2/2023
Report Due	Mon 13/2/2023
SGS Reference	**SE242288A**

SUBMISSION DETAILS

This is to confirm that 19 samples were received on Monday 6/2/2023. Results are expected to be ready by COB Monday 13/2/2023. Please quote SGS reference SE242288A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Soil	Type of documentation received	Email
Date documentation received	6/2/2023@3:19pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE242288A

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Metals in TCLP Extract by ICPOES	TCLP (Toxicity Characteristic Leaching
003	HA103-0.1	2	6

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	27

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288B R0**
Date Received	8/2/2023
Date Reported	13/2/2023

COMMENTS

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

SIGNATORIES

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Shane MCDERMOTT
Inorganic/Metals Chemist

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 8/2/2023

PARAMETER	UOM	LOR	HA102_0.3 SOIL - 25/1/2023 SE242288B.020	HA103_0.3 SOIL - 25/1/2023 SE242288B.021	HA104_0.3 SOIL - 25/1/2023 SE242288B.022	HA108_0.3 SOIL - 25/1/2023 SE242288B.023	HA109_0.3 SOIL - 25/1/2023 SE242288B.024
Lead, Pb	mg/kg	1	910	1200	460	480	350
Zinc, Zn	mg/kg	2	880	1000	960	370	-

PARAMETER	UOM	LOR	HA111_0.3 SOIL - 25/1/2023 SE242288B.025	HA112_0.3 SOIL - 25/1/2023 SE242288B.026	HA116_0.3 SOIL - 25/1/2023 SE242288B.027
Lead, Pb	mg/kg	1	360	350	-
Zinc, Zn	mg/kg	2	310	130	180

Moisture Content [AN002] Tested: 8/2/2023

PARAMETER	UOM	LOR	HA102_0.3 SOIL - 25/1/2023 SE242288B.020	HA103_0.3 SOIL - 25/1/2023 SE242288B.021	HA104_0.3 SOIL - 25/1/2023 SE242288B.022	HA108_0.3 SOIL - 25/1/2023 SE242288B.023	HA109_0.3 SOIL - 25/1/2023 SE242288B.024
% Moisture	%w/w	1	11.5	15.8	26.9	10.5	19.6

PARAMETER	UOM	LOR	HA111_0.3 SOIL - 25/1/2023 SE242288B.025	HA112_0.3 SOIL - 25/1/2023 SE242288B.026	HA116_0.3 SOIL - 25/1/2023 SE242288B.027
% Moisture	%w/w	1	16.7	20.6	17.8

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE242288B R0

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	27

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242288B R0**
Date Received	08 Feb 2023
Date Reported	13 Feb 2023

COMMENTS

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

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

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	8 Soil	Type of documentation received	Email
Date documentation received	8/2/2023@4:34pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE242288B R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA102_0.3	SE242288B.020	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA103_0.3	SE242288B.021	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA104_0.3	SE242288B.022	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA108_0.3	SE242288B.023	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA109_0.3	SE242288B.024	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA111_0.3	SE242288B.025	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA112_0.3	SE242288B.026	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023
HA116_0.3	SE242288B.027	LB270952	25 Jan 2023	08 Feb 2023	08 Feb 2023	08 Feb 2023	13 Feb 2023	10 Feb 2023

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
HA102_0.3	SE242288B.020	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA103_0.3	SE242288B.021	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA104_0.3	SE242288B.022	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA108_0.3	SE242288B.023	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA109_0.3	SE242288B.024	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA111_0.3	SE242288B.025	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA112_0.3	SE242288B.026	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023
HA116_0.3	SE242288B.027	LB270946	25 Jan 2023	08 Feb 2023	24 Jul 2023	08 Feb 2023	24 Jul 2023	13 Feb 2023

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

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

No surrogates were required for this job.

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

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

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

Sample Number	Parameter	Units	LOR	Result
LB270946.001	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242288B.027	LB270952.009	% Moisture	%w/w	1	17.8	17.1	36	4

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE242860.001	LB270946.021	Lead, Pb	mg/kg	1	20	19	35	3
		Zinc, Zn	mg/kg	2	46	45	34	1

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

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB270946.002	Lead, Pb	mg/kg	1	93	89.9	80 - 120	103
	Zinc, Zn	mg/kg	2	270	273	80 - 120	100

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

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

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE241784A.030	LB270946.004	Lead, Pb	mg/kg	1	51	6	50	91
		Zinc, Zn	mg/kg	2	63	19	50	88

MATRIX SPIKE DUPLICATES

SE242288B R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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

Hi GBS team,

Please book this in, thanks.

Kind Regards,

Huong Crawford
Industries & Environment
Production Manager

SGS Australia Pty Ltd
Unit 16, 33 Maddox Street
Alexandria NSW 2015
Phone: +61 (0)2 8594 0403
Fax: + 61 (0)2 8594 0499
E-mail: Huong.Crawford@sgs.com
Web: www.au.sgs.com

View Your Results Online: engage.sgs.com

From: Henry Ongerth <henry.ongerth@cardno.com.au>
Sent: Wednesday, 8 February 2023 4:34 PM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@SGS.com>
Cc: Callum Laker <callum.laker@cardno.com.au>; Sam Levi <sam.levi@cardno.com.au>; Darren Hanvey <darren.hanvey@cardno.com.au>
Subject: [EXTERNAL] RE: Report Job SE242288, your reference 304100928, order number 304100928

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

Hi SGS,

Can I please request that the following samples (currently on hold) be analysed as per the below (standard TAT):

Sample ID	Analysis Requested	
	Lead	Zinc
HA102_0.3	x	x
HA103_0.3	x	x
HA104_0.3	x	x
HA108_0.3	x	x
HA109_0.3	x	
HA111_0.3	x	x
HA112_0.3	x	
HA116_0.3		x

Kind regards,

Henry Ongerth
Graduate Engineer - Rotation Program

henry.ongerth@cardno.com.au

Stantec Australia
Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia





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Please consider the environment before printing this email.

From: AU.Environmental.Sydney@SGS.com <AU.Environmental.Sydney@SGS.com>
Sent: Friday, 3 February 2023 4:54 PM
To: Henry Ongerth <henry.ongerth@cardno.com.au>
Subject: Report Job SE242288, your reference 304100928, order number 304100928

Dear Valued Customer,

Please find attached the report for SGS job SE242288, your reference 304100928, order number 304100928.

If you have any questions or concerns, please don't hesitate to contact your SGS Client Services representative.

Please provide any feedback you have on our service via this link
https://sgs.surveymonkey.com/r/F92B32Q

Best Regards,
SGS Alexandria Customer Service Team
SGS Australia Pty Ltd
Phone: +61 (0)2 8594 0400

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SAMPLE RECEIPT ADVICE

SE242288B

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	27

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Wed 8/2/2023
Report Due	Wed 15/2/2023
SGS Reference	**SE242288B**

SUBMISSION DETAILS

This is to confirm that 27 samples were received on Wednesday 8/2/2023. Results are expected to be ready by COB Wednesday 15/2/2023.
Please quote SGS reference SE242288B when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	8 Soil	Type of documentation received	Email
Date documentation received	8/2/2023@4:34pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	None
Complete documentation received	Yes		

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

COMMENTS

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

SAMPLE RECEIPT ADVICE

SE242288B

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content	Total Recoverable Elements in Soil/Waste
020	HA102_0.3	1	2
021	HA103_0.3	1	2
022	HA104_0.3	1	2
023	HA108_0.3	1	2
024	HA109_0.3	1	1

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE242288B

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content	Total Recoverable Elements in Soil/Waste
025	HA111_0.3	1	2
026	HA112_0.3	1	1
027	HA116_0.3	1	1

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

Request for Laboratory Services and Chain of Custody Form

Delivery Dock 2, 179 Magowar Road, GIRRAWEEN, NSW 2145 Ph: +61 2 9900 8421 Email: EnviroSampleNSW@eurofins.com

Laboratory Section

Received Date: 25/1/23 Received By: [redacted] Cooling Method: ☐ Ice ☐ Icepack ☑ None Samples intact: ☑ Yes ☐ No

Logged-in Date: _____ Time of Receipt: 5:25 Cooler Sealed: ☐ Yes ☐ No ☐ N/A Temperature: ☑ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: 0421324022 Fax:

Quote #:

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TA Urgent TA requires lab approval

Notes:

Client information		PO No.:	Project No.: 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☐ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: [redacted] Lead	asbestos (presence/absence)	[redacted] Zinc	Asbestos quantification (NEPM)	[redacted] Hold	[redacted] TRH	[redacted]						
1	QC100	0.1	25/01/2023	AM/PM	Soil	Jar	+		X										
2	QC200	0.1	25/01/2023	AM/PM	Soil	Jar	X		X			X							

SGS EHS Sydney COC

SE242289

Sampled By: Henry Ongerth and Claire Corbett **Date:** 25/01/2023

Relinquished By: Henry Ongerth [redacted] **Date:** 25/01/23 **Time:** 5:22pm

source Sydney.pdf page: 1 SGS Ref: SE242289_COC

SAMPLE RECEIPT ADVICE

SE242289

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Wed 25/1/2023
Report Due	Fri 3/2/2023
SGS Reference	**SE242289**

SUBMISSION DETAILS

This is to confirm that 2 samples were received on Wednesday 25/1/2023. Results are expected to be ready by COB Friday 3/2/2023. Please quote SGS reference SE242289 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	2 Soil	Type of documentation received	COC
Date documentation received	25/1/2023	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	26.5°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	None	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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

SAMPLE RECEIPT ADVICE

SE242289

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928

SUMMARY OF ANALYSIS

No.	Sample ID	Moisture Content	Total Recoverable Elements in Soil/Waste	TRH (Total Recoverable Hydrocarbons) in Soil	Volatile Petroleum Hydrocarbons in Soil
001	QC100_0.1	1	2	-	-
002	QC200_0.1	1	2	9	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	5

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE242738 R0**
Date Received	6/2/2023
Date Reported	13/2/2023

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Sample #5: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.
Sample #1-4: A portion of the sample supplied has been sub-sampled for asbestos analysis in soil according to SGS In-house procedures due to large volume. We therefore cannot guarantee that the sub-sample is representative of the entire sample supplied. SGS Industries and Environment recommends supplying approximately 50-100g of sample in a separate container.
Asbestos analysed by Approved Identifier Yusuf Kuthpudin

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Bennet LO
Senior Chemist

Dong LIANG
Metals/Inorganics Team Leader

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

Shane MCDERMOTT
Inorganic/Metals Chemist

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
TRH C6-C9	mg/kg	20	<20	<20	<20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25	<25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	<25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	**61**	**59**	**71**	**76**	**82**
TRH C29-C36	mg/kg	45	**99**	**82**	**87**	**100**	**100**
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	**140**	**120**	**140**	**150**	**150**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	**160**	**140**	**160**	**180**	**180**
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.2**	<0.1	<0.1
Pyrene	mg/kg	0.1	<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	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	**0.1**	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
Lead, Pb	mg/kg	1	98	22	15	31	19

Moisture Content [AN002] Tested: 7/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
% Moisture	%w/w	1	**14.5**	**10.7**	**9.8**	**14.3**	**9.6**

Fibre Identification in soil [AS4964/AN602] Tested: 9/2/2023

PARAMETER	UOM	LOR	HA201 0.1 SOIL - 3/2/2023 SE242738.001	HA202 0.1 SOIL - 3/2/2023 SE242738.002	HA203 0.1 SOIL - 3/2/2023 SE242738.003	HA204 0.1 SOIL - 3/2/2023 SE242738.004	DUP1 SOIL - 3/2/2023 SE242738.005
Asbestos Detected	No unit	-	No	No	No	No	No
Estimated Fibres*	%w/w	0.01	<0.01	<0.01	<0.01	<0.01	<0.01

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN420	(SVOCs) including OC, OP, PCB, Herbicides, PAH, Phthalates and Speciated Phenols (etc) in soils, sediments and waters are determined by GCMS/ECD technique following appropriate solvent extraction process (Based on USEPA 3500C and 8270D). Total PAH calculated from individual analyte detections at or above the limit of reporting .
AN420	Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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source: Sydney.pdf page: 4 SGS Ref: SE242738_COC

CHAIN OF CUSTODY RECORD

Cardno

now

Stantec

LAB Name	SGS
Address	

Client	Stantec Australia Pty Ltd suite 2 level 2, 22 honey suckle drive Newcastle NSW 2300	**Contact Numbers** **Phone** 0249 654555 **Fax** 0249 654666	
Contact	Brock Collinson	**E-mail**	brock.collinson@cardno.com.au henry.ongerth@cardno.com.au
Sampled by	Brock Collinson		
Project Ref:	304100928	**Date Results Required**	Standard TAT

Laboratory LIMS ID	Client Sample ID	Date Sampled	Matrix: Soil	Matrix: Water	Containers/Preservation: Soil Jar (G) Nat. Orange	Purple JAR	Orange Jar	50mL VOA Vial (G) H_2SO_4 Maroon	0.1-1.0 litre (P) H_2SO_4 Maroon	0.2-1.0 litre (G) H_2SO_4 Maroon	0.1-0.2 (P) Filtered?? Y=Yes, N=No (HNO3) Red	0.2l (P) NaOH Blue	Other - Zip Lock Bag	Analysis Required: BTEX, PAH, TRH, LEAD, ASBESTOS	HOLD	TRH	BTEX		
1	HA201 0.1	3/02/2023	X		X									X					
	HA201 0.3	3/02/2023	X		X										X				
2	HA202 0.1	3/02/2023	X		X									X					
	HA202 0.3	3/02/2023	X		X										X				
3	HA203 0.1	3/02/2023	X		X									X					
	HA203 0.3	3/02/2023	X		X										X				
4	HA204 0.1	3/02/2023	X		X									X					
	HA204 0.3	3/02/2023	X		X										X				
5	DUP1	3/02/2023	X		X									X					
	TRIP1	3/02/2023	X		X										X				
	TRIP SPIKE	3/02/2023														X	X	All samples chilled immediately after sampling event.	
	TRIP BLANK	3/02/2023														X	X		

SGS EHS Sydney COC

SE242738

Relinquished by Brock Collinson Signature Date/Time 3/02/2023

Received by Signature Date/Time 06/02/23 @10:35 *Custody Seals Intact? / Samples Received Chilled?*

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928**
Order Number	**304100928**
Samples	40

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE243062 R0**
Date Received	13/2/2023
Date Reported	21/2/2023

COMMENTS

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

SIGNATORIES



Akheeqar BENIAMEEN
Chemist



Bennet LO
Senior Chemist



Dong LIANG
Metals/Inorganics Team Leader



Kamrul AHSAN
Senior Chemist



Shane MCDERMOTT
Inorganic/Metals Chemist

VOC's in Soil [AN433] Tested: 14/2/2023

PARAMETER	UOM	LOR	TS SOIL - 10/2/2023 SE243062.039	TB SOIL - 10/2/2023 SE243062.040
Benzene	mg/kg	0.1	[87%]	<0.1
Toluene	mg/kg	0.1	[91%]	<0.1
Ethylbenzene	mg/kg	0.1	[93%]	<0.1
m/p-xylene	mg/kg	0.2	[93%]	<0.2
o-xylene	mg/kg	0.1	[94%]	<0.1
Total Xylenes*	mg/kg	0.3	-	<0.3
Total BTEX*	mg/kg	0.6	-	<0.6
Naphthalene (VOC)*	mg/kg	0.1	-	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 14/2/2023

PARAMETER	UOM	LOR	TB SOIL - 10/2/2023 SE243062.040
TRH C6-C9	mg/kg	20	<20
Benzene (F0)	mg/kg	0.1	<0.1
TRH C6-C10	mg/kg	25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 14/2/2023

PARAMETER	UOM	LOR	TB SOIL - 10/2/2023 SE243062.040
TRH C10-C14	mg/kg	20	<20
TRH C15-C28	mg/kg	45	<45
TRH C29-C36	mg/kg	45	<45
TRH C37-C40	mg/kg	100	<100
TRH >C10-C16	mg/kg	25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120
TRH C10-C36 Total	mg/kg	110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 15/2/2023

PARAMETER	UOM	LOR	HA301_0.1 SOIL - 10/2/2023 SE243062.001	HA302_0.1 SOIL - 10/2/2023 SE243062.002	HA303_0.1 SOIL - 10/2/2023 SE243062.003	HA304_0.1 SOIL - 10/2/2023 SE243062.004	HA305_0.1 SOIL - 10/2/2023 SE243062.005
Lead, Pb	mg/kg	1	25	17	9	10	32
Zinc, Zn	mg/kg	2	90	22	15	12	32

PARAMETER	UOM	LOR	HA306_0.1 SOIL - 10/2/2023 SE243062.006	HA307_0.1 SOIL - 10/2/2023 SE243062.007	HA308_0.1 SOIL - 10/2/2023 SE243062.008	HA309_0.1 SOIL - 10/2/2023 SE243062.009	HA310_0.1 SOIL - 10/2/2023 SE243062.010
Lead, Pb	mg/kg	1	29	52	31	340	190
Zinc, Zn	mg/kg	2	77	72	63	280	230

PARAMETER	UOM	LOR	HA311_0.1 SOIL - 10/2/2023 SE243062.011	QA111 SOIL - 10/2/2023 SE243062.012	HA312_0.1 SOIL - 10/2/2023 SE243062.013	HA313_0.1 SOIL - 10/2/2023 SE243062.014	HA314_0.1 SOIL - 10/2/2023 SE243062.015
Lead, Pb	mg/kg	1	460	460	97	50	96
Zinc, Zn	mg/kg	2	200	200	100	95	160

PARAMETER	UOM	LOR	HA315_0.1 SOIL - 10/2/2023 SE243062.016	HA316_0.1 SOIL - 10/2/2023 SE243062.017	HA317_0.1 SOIL - 10/2/2023 SE243062.018	HA318_0.1 SOIL - 10/2/2023 SE243062.019	HA319_0.1 SOIL - 10/2/2023 SE243062.020
Lead, Pb	mg/kg	1	81	71	270	120	73
Zinc, Zn	mg/kg	2	160	140	290	69	230

PARAMETER	UOM	LOR	HA320_0.1 SOIL - 10/2/2023 SE243062.021	QA112 SOIL - 10/2/2023 SE243062.022	HA321_0.1 SOIL - 10/2/2023 SE243062.023	HA322_0.1 SOIL - 10/2/2023 SE243062.024	HA323_0.1 SOIL - 10/2/2023 SE243062.025
Lead, Pb	mg/kg	1	240	260	280	75	94
Zinc, Zn	mg/kg	2	170	180	550	92	130

PARAMETER	UOM	LOR	HA324_0.1 SOIL - 10/2/2023 SE243062.026	HA325_0.1 SOIL - 10/2/2023 SE243062.027	QA113 SOIL - 10/2/2023 SE243062.028	HA326_0.1 SOIL - 10/2/2023 SE243062.029	HA327_0.1 SOIL - 10/2/2023 SE243062.030
Lead, Pb	mg/kg	1	83	120	110	47	17
Zinc, Zn	mg/kg	2	84	160	160	77	42

PARAMETER	UOM	LOR	HA328_0.1 SOIL - 10/2/2023 SE243062.031	HA329_0.1 SOIL - 10/2/2023 SE243062.032	HA330_0.1 SOIL - 10/2/2023 SE243062.033	HA331_0.1 SOIL - 10/2/2023 SE243062.034
Lead, Pb	mg/kg	1	10	91	200	1600
Zinc, Zn	mg/kg	2	16	140	220	830

Moisture Content [AN002] Tested: 14/2/2023

PARAMETER	UOM	LOR	HA301_0.1 SOIL - 10/2/2023 SE243062.001	HA302_0.1 SOIL - 10/2/2023 SE243062.002	HA303_0.1 SOIL - 10/2/2023 SE243062.003	HA304_0.1 SOIL - 10/2/2023 SE243062.004	HA305_0.1 SOIL - 10/2/2023 SE243062.005
% Moisture	%w/w	1	15.8	8.1	6.9	6.9	10.2

PARAMETER	UOM	LOR	HA306_0.1 SOIL - 10/2/2023 SE243062.006	HA307_0.1 SOIL - 10/2/2023 SE243062.007	HA308_0.1 SOIL - 10/2/2023 SE243062.008	HA309_0.1 SOIL - 10/2/2023 SE243062.009	HA310_0.1 SOIL - 10/2/2023 SE243062.010
% Moisture	%w/w	1	8.6	6.3	3.9	20.3	27.3

PARAMETER	UOM	LOR	HA311_0.1 SOIL - 10/2/2023 SE243062.011	QA111 SOIL - 10/2/2023 SE243062.012	HA312_0.1 SOIL - 10/2/2023 SE243062.013	HA313_0.1 SOIL - 10/2/2023 SE243062.014	HA314_0.1 SOIL - 10/2/2023 SE243062.015
% Moisture	%w/w	1	27.8	31.2	20.1	6.3	11.1

PARAMETER	UOM	LOR	HA315_0.1 SOIL - 10/2/2023 SE243062.016	HA316_0.1 SOIL - 10/2/2023 SE243062.017	HA317_0.1 SOIL - 10/2/2023 SE243062.018	HA318_0.1 SOIL - 10/2/2023 SE243062.019	HA319_0.1 SOIL - 10/2/2023 SE243062.020
% Moisture	%w/w	1	14.5	8.3	15.3	15.1	8.6

PARAMETER	UOM	LOR	HA320_0.1 SOIL - 10/2/2023 SE243062.021	QA112 SOIL - 10/2/2023 SE243062.022	HA321_0.1 SOIL - 10/2/2023 SE243062.023	HA322_0.1 SOIL - 10/2/2023 SE243062.024	HA323_0.1 SOIL - 10/2/2023 SE243062.025
% Moisture	%w/w	1	11.1	11.8	7.5	6.6	6.9

PARAMETER	UOM	LOR	HA324_0.1 SOIL - 10/2/2023 SE243062.026	HA325_0.1 SOIL - 10/2/2023 SE243062.027	QA113 SOIL - 10/2/2023 SE243062.028	HA326_0.1 SOIL - 10/2/2023 SE243062.029	HA327_0.1 SOIL - 10/2/2023 SE243062.030
% Moisture	%w/w	1	8.4	6.1	5.6	5.1	4.7

PARAMETER	UOM	LOR	HA328_0.1 SOIL - 10/2/2023 SE243062.031	HA329_0.1 SOIL - 10/2/2023 SE243062.032	HA330_0.1 SOIL - 10/2/2023 SE243062.033	HA331_0.1 SOIL - 10/2/2023 SE243062.034	TB SOIL - 10/2/2023 SE243062.040
% Moisture	%w/w	1	2.5	15.1	16.0	13.5	<1.0

Trace Metals (Total) in Water by ICPMS [AN022/AN318] Tested: 15/2/2023

PARAMETER	UOM	LOR	RIN_230210 WATER - 10/2/2023 SE243062.035	TAP01 WATER - 10/2/2023 SE243062.036	TAP02 WATER - 10/2/2023 SE243062.037	TAP03 WATER - 10/2/2023 SE243062.038
Total Lead	µg/L	1	<1	**2**	**2**	**6**
Total Zinc	µg/L	5	<5	**98**	**110**	**140**

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
AN022/AN318	Following acid digestion of un filtered sample, determination of elements at trace level in waters by ICP-MS technique, referenced to USEPA 6020B and USEPA 200.8 (5.4).
AN022	The water sample is digested with Nitric Acid and made up to the original volume similar to APHA3030E.
AN040/AN320	A portion of sample is digested with nitric acid to decompose organic matter and hydrochloric acid to complete the digestion of metals. The digest is then analysed by ICP OES with metals results reported on the dried sample basis. Based on USEPA method 200.8 and 6010C.
AN040	A portion of sample is digested with Nitric acid to decompose organic matter and Hydrochloric acid to complete the digestion of metals and then filtered for analysis by ASS or ICP as per USEPA Method 200.8.
AN403	Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
AN403	Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
AN403	The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
AN433	VOCs and C6-C9 Hydrocarbons by GC-MS P&T: VOC`s are volatile organic compounds. The sample is presented to a gas chromatograph via a purge and trap (P&T) concentrator and autosampler and is detected with a Mass Spectrometer (MSD). Solid samples are initially extracted with methanol whilst liquid samples are processed directly. References: USEPA 5030B, 8020A, 8260.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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source: SE_Autoscan.pdf page: 1 SGS Ref: SE243062_COC

E-MAILED 13/2 @ 5:59pm

SGS

Page No: 1/4

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 13.2.23 Received By: Cooling Method: ☐ Ice ☒ Icepack ☐ None Samples intact: ☐ Yes ☐ No

Logged-in Date: Time of Receipt: 6:00 Pm Cooler Sealed: ☒ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☒ Chilled 6.1 °C

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | PO No.: | Project No.: 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 | **After Hours Phone Number:**

Fax Number: | **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
1	HA301_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QA110	0.1	10/02/2023	AM/PM	Soil	Jar					X							
	QC110	0.1	10/02/2023	AM/PM	Soil	Jar					X			X				
	HA301_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
2	HA302_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA302_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
3	HA303_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA303_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
4	HA304_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA304_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
5	HA305_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA305_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
6	HA306_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA306_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
7	HA307_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
8	HA308_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA308_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
9	HA309_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA309_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
10	HA310_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA310_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							

SGS EHS Sydney COC

SE243062

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 13/02/23 Received By: B. Subaran

Logged-in Date: Time of Receipt: 6:00

Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Cooler Sealed: ☑ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☑ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
11	HA311_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
12	QA111	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC111	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA311_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
13	HA312_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA312_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
14	HA313_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA313_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
15	HA314_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA314_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
16	HA315_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA315_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
17	HA316_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA316_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
18	HA317_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA317_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
19	HA318_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA318_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
20	HA319_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA319_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
21	HA320_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia, Unit 16, 33 Maddox Street, Alexandria, NSW 2015 Ph: +61 2 8594 0400 Fax: +61 2 8594 0499 Email: au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 13/02/23 Received By: B. Subaraj Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: 6.00 Cooler Sealed: ☑ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☑ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:

Name: Henry Ongerth

Company: Stantec

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Email: Accounts.AU@stantec.com and henry.ongerth@cardno.com.au

Phone: Fax:

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information | **PO No.:** | **Project No.:** 304100928

Company Name: Stantec

Contact Name: Henry Ongerth

Address: Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Phone Number: 0421324022 **After Hours Phone Number:**

Fax Number: **Email:** henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): **Email** ☑ **Fax** ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX			
22	QA112	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC112	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA320_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
23	HA321_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA321_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
24	HA322_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA322_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
25	HA323_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA323_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
26	HA324_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA324_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
27	HA325_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
28	QA113	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	QC113	0.1	10/02/2023	AM/PM	Soil	Jar	X	X						X				
	HA325_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
29	HA326_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA326_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
30	HA327_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA327_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
31	HA328_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA328_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							

Sampled By: Henry Ongerth **Date:** 10/02/2023

Relinquished By: Henry Ongerth **Date:** 13/02/2023 **Time:** 5:55pm

SGS

Request for Laboratory Services and Chain of Custody Form

SGS Australia. Unit 16, 33 Maddox Street, Alexandria. NSW 2015 Ph. +61 2 8594 0400 Fax: +61 2 8594 0499 Email au.samplereceipt.sydney@sgs.com

Laboratory Section

Received Date: 13/02/23 Received By: S. Subaraj Cooling Method: ☐ Ice ☑ Icepack ☐ None Samples intact: ☑ Yes ☐ No

Logged-in Date: Time of Receipt: 6:00 Cooler Sealed: ☑ Yes ☐ No ☐ N/A Temperature: ☐ Ambient ☐ Chilled

COD must pay via cheque or credit card before analysis is commenced. AMEX & DINERS cards incur a 5% surcharge

INVOICE TO:		
Name:	Henry Ongerth	
Company:	Stantec	
Address:	Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia	
Email:	Accounts.AU@stantec.com and henry.ongerth@cardno.com.au	
Phone:	Fax:	

Quote #: Stant - IE - JUL 22 - 275935

Attached Parameter List: ☐ Yes ☐ No

Replacement Sample Containers Required: ☐ Yes ☐ No

Results Required By: Standard TAT Urgent TA requires lab approval

Notes: Please submit all results in esdat format. Also please make sure that all analytes are extracted before holding time is reached

Client information		PO No.:	Project No.: 304100928
Company Name:	Stantec		
Contact Name:	Henry Ongerth		
Address:	Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia		
Phone Number:	0421324022	After Hours Phone Number:	
Fax Number:		Email:	henry.ongerth@cardno.com.au

Note: Results will be sent via email to an unlimited number of addresses for no additional fee. In the absence of email, fax is available upon request.

Indicate results format (please check one): Email ☑ Fax ☐

SAMPLE INFORMATION

Lab Sample ID	Sample Identifier	Depth of sample (m)	Date Sampled	Time	Matrix: Soil Water Other	Sampling containers	Analysis Requested: Lead	Zinc	Asbestos (presence/absence)	Asbestos quantification (NEPM)	Hold	Total Lead	Total Zinc	Forward to Eurofins for Analysis	BTEX	TRH		
32	HA329_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA329_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
33	HA330_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA330_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
34	HA331_0.1	0.1	10/02/2023	AM/PM	Soil	Jar	X	X										
	HA331_0.2	0.2	10/02/2023	AM/PM	Soil	ZLB					X							
	HA331-0.2-PACM	0.2	10/02/2023	AM/PM	Soil	ZLB					X							
	HA331_0.3	0.3	10/02/2023	AM/PM	Soil	Jar					X							
35	RIN_230210		10/02/2023	AM/PM	Water	Bottle						X	X					
36	TAP01		10/02/2023	AM/PM	Water	Bottle						X	X					
37	TAP02		10/02/2023	AM/PM	Water	Bottle						X	X					
38	TAP03		10/02/2023	AM/PM	Water	Bottle						X	X					
39	TS		Lap Prepared	ap Prepare	Soil	Vial									X	X		
40	TB		Lap Prepared	ap Prepare	Soil	Vial									X	X		

Sampled By: Henry Ongerth Date: 10/02/2023

Relinquished By: Henry Ongerth Date: 13/02/2023 Time: 5:55pm

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE243062A R0**
Date Received	20 Feb 2023
Date Reported	15 Mar 2023

COMMENTS

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

No respirable fibres detected in all soil samples using trace analysis technique.
Sample #41: Asbestos found in approx 15x8x3mm cement sheet fragments >10.
Asbestos analysed by Approved Identifier Yusuf Kuthpudin and Ravee Sivasubramaniam .

SIGNATORIES

Ravee SIVASUBRAMANIAM
Hygiene Team Leader

RESULTS

Fibre ID in bulk materials — Method S4964

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE243062A.042	HA331-0.2_PACM	Other	65x40x3mm Cement Sheet Fragment	10 Feb 2023	Chrysotile Asbestos Detected	

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE243062A.041	HA331-0.2	Soil	515g Sand, Soil, Rocks	10 Feb 2023	Chrysotile Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	>0.01

Gravimetric Determination of Asbestos in Soil [AN605] Tested: 23/2/2023

PARAMETER	UOM	LOR	HA331-0.2 SOIL - 10/2/2023 SE243062A.041
Total Sample Weight*	g	1	**515**
Bonded ACM in >7mm Sample*	g	0.001	<0.001
AF/FA in >2mm to <7mm Sample*	g	0.00001	**0.261**
AF/FA in <2mm Sample*	g	0.00001	**0.0202**
Asbestos in soil (>7mm ACM)*	%w/w	0.01	<0.01
Asbestos in soil (>2mm to <7mm AF/FA)*	%w/w	0.001	**0.051**
Asbestos in soil (<2mm AF/FA)*	%w/w	0.001	**0.004**
Asbestos in soil (<7mm AF/FA)*	%w/w	0.001	**0.055**
Fibre Type*	No unit	-	Chrysotile

METHOD	METHODOLOGY SUMMARY
AN602/AS4964	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic `clues`, which provide a reasonable degree of certainty, dispersion staining is a mandatory `clue` for positive identification. If sufficient `clues` are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602/AS4964	Fibres/material that cannot be unequivocably identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602/AS4964	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples , Section 8.4, Trace Analysis Criteria, Note 4 states:"Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602/AS4964	The sample can be reported “no asbestos found at the reporting limit (RL) of 0.1 g/kg” (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- (a) no trace asbestos fibres have been detected (i.e. no ‘respirable ’ fibres): (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg: and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.
AN605	This technique gravimetrically determines the mass of Bonded Asbestos Containing Material retained on a 7mm Sieve and assumes that 15% of this ACM is asbestos. This calculated asbestos weight is then calculated as a percentage of the total sample weight. Any fibrous asbestos (FA) found in this fraction will be added to the 2-7mm fraction and its mass recorded there.
AN605	This technique also gravimetrically determines the mass of Fibrous Asbestos (FA) and Asbestos Fines (AF) Containing Material retained on and passing a 2mm sieve post 7mm sieving. Assumes that FA and AF are 100% asbestos containing. This calculated asbestos weight is then calculated as a percentage of the total sample weight. This does not include free/respirable fibres which are only observed by standard trace analysis as per AN602.
AN605	Bonded asbestos containing material (Bonded ACM) comprises asbestos-containing-material which is sound in condition. Fibrous asbestos (FA) comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. Asbestos fines (AF) includes free fibres, small fibre bundles and also small fragments of bonded ACM that passes through a 7mm sieve - which implies that the bonded ACM fragments have a substantial degree of damage which increases the potential for fibre release.
AN-605	Insofar as is technically feasible, this report is consistent with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment Remediation and Management of Asbestos - Contaminated Sites in Western Australia - May 2009 and NEPM 1999 (2013) schedule B1 section 4..

FOOTNOTES

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

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

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

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

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

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

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source: SE_Autoscan.pdf page: 1 SGS Ref: SE243062A_COC

Yin, Emily (Sydney)

From: Henry Ongerth <henry.ongerth@cardno.com.au>
Sent: Monday, 20 February 2023 5:44 PM
To: AU.SampleReceipt.Sydney, AU (Sydney); AU.Environmental.Sydney, AU (Sydney)
Cc: Callum Laker; Sam Levi
Subject: [EXTERNAL] RE: SGS Sample Receipt Advice (Ref: 304100928, Lab Ref: SE243062)

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

Hi SGS,

Can I please request that you analyse the following samples for asbestos (NEPM/WA) method:

- HA331-0.2
- HA331-0.2-PACM

Kind regards,

Henry Ongerth
Graduate Engineer - Rotation Program

SGS EHS Alexandria Laboratory
SE243062A COC
Received: 20 – Feb – 2023

henry.ongerth@cardno.com.au

Stantec Australia
Level 9, The Forum, 203 Pacific Highway St Leonards New South Wales 2065 Australia

Stantec

Stantec acknowledges the Traditional Owners of Country throughout Australia and recognises their continuing connection to lands, waters and communities. We pay our respect to Aboriginal and Torres Strait Islander cultures and to Elders past and present.

The content of this email is the confidential property of Stantec and should not be copied, modified, retransmitted, or used for any purpose except with Stantec's written authorization. If you are not the intended recipient, please delete all copies and notify us immediately.

Please consider the environment before printing this email.

From: AU.Samplereceipt.Sydney@SGS.com <AU.Samplereceipt.Sydney@SGS.com>
Sent: Tuesday, 14 February 2023 8:18 PM
To: Henry Ongerth <henry.ongerth@cardno.com.au>
Subject: SGS Sample Receipt Advice (Ref: 304100928, Lab Ref: SE243062)

Dear Henry Ongerth,

Please be advised we have received samples for analysis as detailed in the attached documentation.

Please provide any feedback you have on our service via this link https://sgs.surveymonkey.com/r/F92B32Q

Best regards,
SGS Alexandria Sample Administration Team

SAMPLE RECEIPT ADVICE

SE243062A

CLIENT DETAILS

Contact	Henry Ongerth
Client	STANTEC AUSTRALIA PTY LTD
Address	LEVEL 22, 570 BOURKE STREET MELBOURNE VIC 3000
Telephone	61 3 85547000
Facsimile	(Not specified)
Email	henry.ongerth@cardno.com.au
Project	**304100928 - Additional**
Order Number	**304100928**
Samples	42

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 20/2/2023
Report Due	Mon 27/2/2023
SGS Reference	**SE243062A**

SUBMISSION DETAILS

This is to confirm that 42 samples were received on Monday 20/2/2023. Results are expected to be ready by COB Monday 27/2/2023. Please quote SGS reference SE243062A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Soil, 1 Material	Type of documentation received	Email
Date documentation received	20/2/2023@5:44pm	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	6.1°C
Sample container provider	SGS	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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

SAMPLE RECEIPT ADVICE

SE243062A

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 - Additional

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre ID in bulk materials	Fibre Identification in soil	Gravimetric Determination of Asbestos in Soil
041	HA331-0.2	-	2	9
042	HA331-0.2_PACM	1	-	-

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights**
Order Number	**304100928**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE264540 R0**
Date Received	1/5/2024
Date Reported	10/5/2024

COMMENTS

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

PFAS for samples #2 wasn't analysed as PFAS container wasn't supplied.

SIGNATORIES

Akheeqar BENIAMEEN
Chemist

Dong LIANG
Metals/Inorganics Team Leader

Huong CRAWFORD
Production Manager

Ly Kim HA
Organic Section Head

Teresa NGUYEN
Organic Chemist

VOC's in Soil [AN433] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002	Trip3 SOIL - 24/4/2024 SE264540.004
Benzene	mg/kg	0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1
m/p-xylene	mg/kg	0.2	<0.2	<0.2
o-xylene	mg/kg	0.1	<0.1	<0.1
Total Xylenes*	mg/kg	0.3	<0.3	<0.3
Total BTEX*	mg/kg	0.6	<0.6	<0.6
Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1

Volatile Petroleum Hydrocarbons in Soil [AN433] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002	Trip3 SOIL - 24/4/2024 SE264540.004
TRH C6-C9	mg/kg	20	<20	<20
Benzene (F0)	mg/kg	0.1	<0.1	<0.1
TRH C6-C10	mg/kg	25	<25	<25
TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002	Trip3 SOIL - 24/4/2024 SE264540.004
TRH C10-C14	mg/kg	20	<20	<20
TRH C15-C28	mg/kg	45	<45	**50**
TRH C29-C36	mg/kg	45	<45	**51**
TRH C37-C40	mg/kg	100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25
TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	**92**
TRH >C34-C40 (F4)	mg/kg	120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210

PAH (Polynuclear Aromatic Hydrocarbons) in Soil [AN420] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002	Trip3 SOIL - 24/4/2024 SE264540.004
Naphthalene	mg/kg	0.1	<0.1	<0.1
2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1
Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1
Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1
Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1
Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1
Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	<0.2	<0.2
Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	<0.3	<0.3
Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	<0.2	<0.2
Total PAH (18)	mg/kg	0.8	<0.8	<0.8
Total PAH (NEPM/WHO 16)	mg/kg	0.8	<0.8	<0.8

OC Pesticides in Soil [AN420] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002
Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
Alpha BHC	mg/kg	0.1	<0.1
Lindane (gamma BHC)	mg/kg	0.1	<0.1
Heptachlor	mg/kg	0.1	<0.1
Aldrin	mg/kg	0.1	<0.1
Beta BHC	mg/kg	0.1	<0.1
Delta BHC	mg/kg	0.1	<0.1
Heptachlor epoxide	mg/kg	0.1	<0.1
o,p'-DDE*	mg/kg	0.1	<0.1
Alpha Endosulfan	mg/kg	0.2	<0.2
Gamma Chlordane	mg/kg	0.1	<0.1
Alpha Chlordane	mg/kg	0.1	<0.1
trans-Nonachlor	mg/kg	0.1	<0.1
p,p'-DDE	mg/kg	0.1	<0.1
Dieldrin	mg/kg	0.2	<0.2
Endrin	mg/kg	0.2	<0.2
o,p'-DDD*	mg/kg	0.1	<0.1
o,p'-DDT*	mg/kg	0.1	<0.1
Beta Endosulfan	mg/kg	0.2	<0.2
p,p'-DDD	mg/kg	0.1	<0.1
p,p'-DDT	mg/kg	0.1	<0.1
Endosulfan sulphate	mg/kg	0.1	<0.1
Endrin aldehyde	mg/kg	0.1	<0.1
Methoxychlor	mg/kg	0.1	<0.1
Endrin ketone	mg/kg	0.1	<0.1
Isodrin	mg/kg	0.1	<0.1
Mirex	mg/kg	0.1	<0.1
Total CLP OC Pesticides	mg/kg	1	<1
Total OC VIC EPA	mg/kg	1	<1

OP Pesticides in Soil [AN420] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002
Dichlorvos	mg/kg	0.5	<0.5
Dimethoate	mg/kg	0.5	<0.5
Diazinon (Dimpylate)	mg/kg	0.5	<0.5
Fenitrothion	mg/kg	0.2	<0.2
Malathion	mg/kg	0.2	<0.2
Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
Bromophos Ethyl	mg/kg	0.2	<0.2
Methidathion	mg/kg	0.5	<0.5
Ethion	mg/kg	0.2	<0.2
Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
Total OP Pesticides*	mg/kg	1.7	<1.7

PCBs in Soil [AN420] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002
Arochlor 1016	mg/kg	0.2	<0.2
Arochlor 1221	mg/kg	0.2	<0.2
Arochlor 1232	mg/kg	0.2	<0.2
Arochlor 1242	mg/kg	0.2	<0.2
Arochlor 1248	mg/kg	0.2	<0.2
Arochlor 1254	mg/kg	0.2	<0.2
Arochlor 1260	mg/kg	0.2	<0.2
Arochlor 1262	mg/kg	0.2	<0.2
Arochlor 1268	mg/kg	0.2	<0.2
Total PCBs (Arochlors)	mg/kg	1	<1

Speciated Phenols in Soil [AN420] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002
Phenol	mg/kg	0.5	<0.5
2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
Total Cresol	mg/kg	1.5	<1.5
2-chlorophenol	mg/kg	0.5	<0.5
2,4-dimethylphenol	mg/kg	0.5	<0.5
2,6-dichlorophenol	mg/kg	0.5	<0.5
2,4-dichlorophenol	mg/kg	0.5	<0.5
2,4,6-trichlorophenol	mg/kg	0.5	<0.5
2-nitrophenol	mg/kg	0.5	<0.5
4-nitrophenol	mg/kg	1	<1
2,4,5-trichlorophenol	mg/kg	0.5	<0.5
Pentachlorophenol	mg/kg	0.5	<0.5
2,4-dinitrophenol	mg/kg	2	<2
2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
4-chloro-3-methylphenol	mg/kg	2	<2

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES [AN040/AN320] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip1 SOIL - 22/4/2024 SE264540.001	Trip2 SOIL - 24/4/2024 SE264540.002	Trip4 SOIL - 24/4/2024 SE264540.003	Trip3 SOIL - 24/4/2024 SE264540.004
Lead, Pb	mg/kg	1	**150**	**3**	**77**	**10**
Arsenic, As	mg/kg	1	-	**1**	-	**15**
Cadmium, Cd	mg/kg	0.3	-	<0.3	-	<0.3
Chromium, Cr	mg/kg	0.5	-	**38**	-	**15**
Copper, Cu	mg/kg	0.5	-	**25**	-	**4.5**
Nickel, Ni	mg/kg	0.5	-	**23**	-	**3.5**
Zinc, Zn	mg/kg	2	-	**61**	-	**25**

Mercury in Soil [AN312] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip2 SOIL - 24/4/2024 SE264540.002	Trip3 SOIL - 24/4/2024 SE264540.004
Mercury	mg/kg	0.05	<0.05	<0.05

Moisture Content [AN002] Tested: 2/5/2024

PARAMETER	UOM	LOR	Trip1 SOIL - 22/4/2024 SE264540.001	Trip2 SOIL - 24/4/2024 SE264540.002	Trip4 SOIL - 24/4/2024 SE264540.003	Trip3 SOIL - 24/4/2024 SE264540.004
% Moisture	%w/w	1	**22.0**	**7.8**	**29.0**	**20.0**

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

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE264540 R0

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights**
Order Number	**304100928**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
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Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE264540 R0**
Date Received	01 May 2024
Date Reported	10 May 2024

COMMENTS

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

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

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

Matrix Spike	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	2 items
	Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES	1 item
	TRH (Total Recoverable Hydrocarbons) in Soil	5 items
	Volatile Petroleum Hydrocarbons in Soil	2 items

SAMPLE SUMMARY

Sample counts by matrix	4 Soil	Type of documentation received	COC
Date documentation received	1/5/2024	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.1°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE264540 R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311356	24 Apr 2024	01 May 2024	22 May 2024	02 May 2024	22 May 2024	06 May 2024
Trip3	SE264540.004	LB311356	24 Apr 2024	01 May 2024	22 May 2024	02 May 2024	22 May 2024	06 May 2024

Moisture Content

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip1	SE264540.001	LB311353	22 Apr 2024	01 May 2024	06 May 2024	02 May 2024	07 May 2024	06 May 2024
Trip2	SE264540.002	LB311353	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	07 May 2024	06 May 2024
Trip4	SE264540.003	LB311353	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	07 May 2024	06 May 2024
Trip3	SE264540.004	LB311353	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	07 May 2024	06 May 2024

OC Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024
Trip3	SE264540.004	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	07 May 2024

OP Pesticides in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024
Trip3	SE264540.004	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	07 May 2024

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024
Trip3	SE264540.004	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024

PCBs in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024
Trip3	SE264540.004	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	07 May 2024

Speciated Phenols in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311349	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	07 May 2024

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

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip1	SE264540.001	LB311354	22 Apr 2024	01 May 2024	19 Oct 2024	02 May 2024	19 Oct 2024	07 May 2024
Trip2	SE264540.002	LB311354	24 Apr 2024	01 May 2024	21 Oct 2024	02 May 2024	21 Oct 2024	07 May 2024
Trip4	SE264540.003	LB311354	24 Apr 2024	01 May 2024	21 Oct 2024	02 May 2024	21 Oct 2024	07 May 2024
Trip3	SE264540.004	LB311354	24 Apr 2024	01 May 2024	21 Oct 2024	02 May 2024	21 Oct 2024	07 May 2024

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024
Trip3	SE264540.004	LB311350	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	11 Jun 2024	06 May 2024

VOC's in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311352	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	08 May 2024	07 May 2024
Trip3	SE264540.004	LB311352	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	08 May 2024	07 May 2024

Volatile Petroleum Hydrocarbons in Soil

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
Trip2	SE264540.002	LB311352	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	08 May 2024	07 May 2024
Trip3	SE264540.004	LB311352	24 Apr 2024	01 May 2024	08 May 2024	02 May 2024	08 May 2024	07 May 2024

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

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

OC Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Tetrachloro-m-xylene (TCMX) (Surrogate)	Trip2	SE264540.002	%	60 - 130%	115

OP Pesticides in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	Trip2	SE264540.002	%	60 - 130%	86
d14-p-terphenyl (Surrogate)	Trip2	SE264540.002	%	60 - 130%	98

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2-fluorobiphenyl (Surrogate)	Trip2	SE264540.002	%	70 - 130%	86
	Trip3	SE264540.004	%	70 - 130%	103
d14-p-terphenyl (Surrogate)	Trip2	SE264540.002	%	70 - 130%	98
	Trip3	SE264540.004	%	70 - 130%	109
d5-nitrobenzene (Surrogate)	Trip2	SE264540.002	%	70 - 130%	94
	Trip3	SE264540.004	%	70 - 130%	112

PCBs in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
TCMX (Surrogate)	Trip2	SE264540.002	%	60 - 130%	115

Speciated Phenols in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
2,4,6-Tribromophenol (Surrogate)	Trip2	SE264540.002	%	70 - 130%	112
d5-phenol (Surrogate)	Trip2	SE264540.002	%	50 - 130%	104

VOC's in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	Trip2	SE264540.002	%	60 - 130%	94
	Trip3	SE264540.004	%	60 - 130%	99
d4-1,2-dichloroethane (Surrogate)	Trip2	SE264540.002	%	60 - 130%	76
	Trip3	SE264540.004	%	60 - 130%	92
d8-toluene (Surrogate)	Trip2	SE264540.002	%	60 - 130%	74
	Trip3	SE264540.004	%	60 - 130%	89

Volatile Petroleum Hydrocarbons in Soil

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

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Bromofluorobenzene (Surrogate)	Trip2	SE264540.002	%	60 - 130%	94
	Trip3	SE264540.004	%	60 - 130%	99
d4-1,2-dichloroethane (Surrogate)	Trip2	SE264540.002	%	60 - 130%	76
	Trip3	SE264540.004	%	60 - 130%	92
d8-toluene (Surrogate)	Trip2	SE264540.002	%	60 - 130%	74
	Trip3	SE264540.004	%	60 - 130%	89

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB311356.001	Mercury	mg/kg	0.05	<0.05

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB311350.001		Alpha BHC	mg/kg	0.1	<0.1
		Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1
		Beta BHC	mg/kg	0.1	<0.1
		Lindane (gamma BHC)	mg/kg	0.1	<0.1
		Delta BHC	mg/kg	0.1	<0.1
		Heptachlor	mg/kg	0.1	<0.1
		Aldrin	mg/kg	0.1	<0.1
		Isodrin	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
		Alpha Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDE	mg/kg	0.1	<0.1
		Dieldrin	mg/kg	0.2	<0.2
		Endrin	mg/kg	0.2	<0.2
		Beta Endosulfan	mg/kg	0.2	<0.2
		p,p'-DDD	mg/kg	0.1	<0.1
		Endrin aldehyde	mg/kg	0.1	<0.1
		Endosulfan sulphate	mg/kg	0.1	<0.1
		p,p'-DDT	mg/kg	0.1	<0.1
		Endrin ketone	mg/kg	0.1	<0.1
		Methoxychlor	mg/kg	0.1	<0.1
		Mirex	mg/kg	0.1	<0.1
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	%	-	112

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB311350.001		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2
		Bromophos Ethyl	mg/kg	0.2	<0.2
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5
		Dichlorvos	mg/kg	0.5	<0.5
		Dimethoate	mg/kg	0.5	<0.5
		Ethion	mg/kg	0.2	<0.2
		Fenitrothion	mg/kg	0.2	<0.2
		Malathion	mg/kg	0.2	<0.2
		Methidathion	mg/kg	0.5	<0.5
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2
	Surrogates	2-fluorobiphenyl (Surrogate)	%	-	102
		d14-p-terphenyl (Surrogate)	%	-	109

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB311350.001	Naphthalene	mg/kg	0.1	<0.1
	2-methylnaphthalene	mg/kg	0.1	<0.1
	1-methylnaphthalene	mg/kg	0.1	<0.1
	Acenaphthylene	mg/kg	0.1	<0.1
	Acenaphthene	mg/kg	0.1	<0.1
	Fluorene	mg/kg	0.1	<0.1
	Phenanthrene	mg/kg	0.1	<0.1
	Anthracene	mg/kg	0.1	<0.1
	Fluoranthene	mg/kg	0.1	<0.1
	Pyrene	mg/kg	0.1	<0.1
	Benzo(a)anthracene	mg/kg	0.1	<0.1
	Chrysene	mg/kg	0.1	<0.1
	Benzo(a)pyrene	mg/kg	0.1	<0.1

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB311350.001		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1
		Benzo(ghi)perylene	mg/kg	0.1	<0.1
		Total PAH (18)	mg/kg	0.8	<0.8
	Surrogates	d5-nitrobenzene (Surrogate)	%	-	105
		2-fluorobiphenyl (Surrogate)	%	-	102
		d14-p-terphenyl (Surrogate)	%	-	109

PCBs in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB311350.001		Arochlor 1016	mg/kg	0.2	<0.2
		Arochlor 1221	mg/kg	0.2	<0.2
		Arochlor 1232	mg/kg	0.2	<0.2
		Arochlor 1242	mg/kg	0.2	<0.2
		Arochlor 1248	mg/kg	0.2	<0.2
		Arochlor 1254	mg/kg	0.2	<0.2
		Arochlor 1260	mg/kg	0.2	<0.2
		Arochlor 1262	mg/kg	0.2	<0.2
		Arochlor 1268	mg/kg	0.2	<0.2
		Total PCBs (Arochlors)	mg/kg	1	<1
	Surrogates	TCMX (Surrogate)	%	-	112

Speciated Phenols in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB311349.001		Phenol	mg/kg	0.5	<0.5
		2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5
		3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1
		2-chlorophenol	mg/kg	0.5	<0.5
		2,4-dimethylphenol	mg/kg	0.5	<0.5
		2,6-dichlorophenol	mg/kg	0.5	<0.5
		2,4-dichlorophenol	mg/kg	0.5	<0.5
		4-chloro-3-methylphenol	mg/kg	2	<2
		2,4,6-trichlorophenol	mg/kg	0.5	<0.5
		2-nitrophenol	mg/kg	0.5	<0.5
		4-nitrophenol	mg/kg	1	<1
		2,4,5-trichlorophenol	mg/kg	0.5	<0.5
		2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1
		Pentachlorophenol	mg/kg	0.5	<0.5
		2,4-dinitrophenol	mg/kg	2	<2
	Surrogates	2,4,6-Tribromophenol (Surrogate)	%	-	99
		d5-phenol (Surrogate)	%	-	97

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

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

Sample Number	Parameter	Units	LOR	Result
LB311354.001	Arsenic, As	mg/kg	1	<1
	Cadmium, Cd	mg/kg	0.3	<0.3
	Chromium, Cr	mg/kg	0.5	<0.5
	Copper, Cu	mg/kg	0.5	<0.5
	Nickel, Ni	mg/kg	0.5	<0.5
	Lead, Pb	mg/kg	1	<1
	Zinc, Zn	mg/kg	2	<2.0

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR	Result
LB311350.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

VOC's in Soil

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

Sample Number	Parameter	Units	LOR

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

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

VOC's in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result
LB311352.001	Monocyclic Aromatic Hydrocarbons	Benzene	mg/kg	0.1	<0.1
		Toluene	mg/kg	0.1	<0.1
		Ethylbenzene	mg/kg	0.1	<0.1
		m/p-xylene	mg/kg	0.2	<0.2
		o-xylene	mg/kg	0.1	<0.1
	Polycyclic VOCs	Naphthalene (VOC)*	mg/kg	0.1	<0.1
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	73
		d8-toluene (Surrogate)	%	-	70
		Bromofluorobenzene (Surrogate)	%	-	77
	Totals	Total BTEX*	mg/kg	0.6	<0.6

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result
LB311352.001		TRH C6-C9	mg/kg	20	<20
	Surrogates	d4-1,2-dichloroethane (Surrogate)	%	-	73

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311356.014	Mercury	mg/kg	0.05	<0.05	<0.05	200	0
SE264609.011	LB311356.023	Mercury	mg/kg	0.05	<0.05	<0.05	200	0

Moisture Content

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264603.004	LB311353.011	% Moisture	%w/w	1	35.9	31.6	33	13
SE264609.011	LB311353.022	% Moisture	%w/w	1	7.1	6.8	44	4

OC Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	4
SE264609.011	LB311350.023		Alpha BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	200	0
			Beta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	200	0
			Delta BHC	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Aldrin	mg/kg	0.1	<0.1	<0.1	200	0
			Isodrin	mg/kg	0.1	<0.1	<0.1	200	0
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	200	0
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	200	0
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	200	0
			Dieldrin	mg/kg	0.2	<0.2	<0.2	200	0
			Endrin	mg/kg	0.2	<0.2	<0.2	200	0
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	200	0
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	200	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

OC Pesticides in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.011	LB311350.023		Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	200	0
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	200	0
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	200	0
			p,p'-DDT	mg/kg	0.1	<0.1	<0.1	200	0
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	200	0
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	200	0
			Mirex	mg/kg	0.1	<0.1	<0.1	200	0
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	200	0
			Total CLP OC Pesticides	mg/kg	1	<1	<1	200	0
			Total OC VIC EPA	mg/kg	1	<1	<1	200	0
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.16	0.16	30	1

OP Pesticides in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	4
SE264609.011	LB311350.023		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	200	0
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	200	0
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	<0.2	200	0
			Diazinon (Dimpylate)	mg/kg	0.5	<0.5	<0.5	200	0
			Dichlorvos	mg/kg	0.5	<0.5	<0.5	200	0
			Dimethoate	mg/kg	0.5	<0.5	<0.5	200	0
			Ethion	mg/kg	0.2	<0.2	<0.2	200	0
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	200	0
			Malathion	mg/kg	0.2	<0.2	<0.2	200	0
			Methidathion	mg/kg	0.5	<0.5	<0.5	200	0
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	200	0
			Total OP Pesticides*	mg/kg	1.7	<1.7	<1.7	200	0
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014	Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
		Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
		Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
		Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
		Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
		Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014		Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.6	30	3
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	4
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.6	30	4
SE264609.011	LB311350.023		Naphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			2-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			1-methylnaphthalene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthylene	mg/kg	0.1	<0.1	<0.1	200	0
			Acenaphthene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluorene	mg/kg	0.1	<0.1	<0.1	200	0
			Phenanthrene	mg/kg	0.1	<0.1	<0.1	200	0
			Anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Chrysene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(k)fluoranthene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(a)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	<0.1	200	0
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	200	0
			Benzo(ghi)perylene	mg/kg	0.1	<0.1	<0.1	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=0*	mg/kg	0.2	<0.2	<0.2	200	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	mg/kg	0.2	<0.2	<0.2	175	0
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	mg/kg	0.3	<0.3	<0.3	134	0
			Total PAH (18)	mg/kg	0.8	<0.8	<0.8	200	0
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.5	30	5
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	0
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	30	3

PCBs in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	4
SE264609.011	LB311350.023		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1260	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	200	0
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	200	0
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	200	0
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	30	1

Speciated Phenols in Soil

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

Original	Duplicate		Parameter	Units	LOR

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Speciated Phenols in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264601.002	LB311349.009		Phenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-methyl phenol (o-cresol)	mg/kg	0.5	<0.5	<0.5	200	0
			3/4-methyl phenol (m/p-cresol)	mg/kg	1	<1	<1	200	0
			Total Cresol	mg/kg	1.5	<1.5	<1.5	200	0
			2-chlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dimethylphenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,6-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-chloro-3-methylphenol	mg/kg	2	<2	<2	200	0
			2,4,6-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2-nitrophenol	mg/kg	0.5	<0.5	<0.5	200	0
			4-nitrophenol	mg/kg	1	<1	<1	200	0
			2,4,5-trichlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,3,4,6/2,3,5,6-tetrachlorophenol	mg/kg	1	<1	<1	200	0
			Pentachlorophenol	mg/kg	0.5	<0.5	<0.5	200	0
			2,4-dinitrophenol	mg/kg	2	<2	<2	200	0
		Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	6.2	6.1	30	1
			d5-phenol (Surrogate)	mg/kg	-	2.4	2.4	30	0

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

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264603.004	LB311354.014	Arsenic, As	mg/kg	1	8	8	42	4
		Cadmium, Cd	mg/kg	0.3	<0.3	<0.3	140	0
		Chromium, Cr	mg/kg	0.5	19	17	33	11
		Copper, Cu	mg/kg	0.5	56	54	31	4
		Nickel, Ni	mg/kg	0.5	6.1	5.6	39	10
		Lead, Pb	mg/kg	1	54	45	32	18
		Zinc, Zn	mg/kg	2	130	120	32	10

TRH (Total Recoverable Hydrocarbons) in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311350.014		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	49	<45	126	9
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	186	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0
SE264609.011	LB311350.023		TRH C10-C14	mg/kg	20	<20	<20	200	0
			TRH C15-C28	mg/kg	45	<45	<45	200	0
			TRH C29-C36	mg/kg	45	<45	<45	149	0
			TRH C37-C40	mg/kg	100	<100	<100	200	0
			TRH C10-C36 Total	mg/kg	110	<110	<110	200	0
			TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	197	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

VOC's in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311352.014	Monocyclic Aromatic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
			Toluene	mg/kg	0.1	<0.1	<0.1	157	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	8.9	50	9
			d8-toluene (Surrogate)	mg/kg	-	9.3	8.5	50	9

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

VOC's in Soil (continued)

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311352.014	Surrogates	Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	9.4	50	9
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0
SE264609.011	LB311352.027	Monocyclic	Benzene	mg/kg	0.1	<0.1	<0.1	200	0
		Aromatic	Toluene	mg/kg	0.1	<0.1	<0.1	156	0
			Ethylbenzene	mg/kg	0.1	<0.1	<0.1	200	0
			m/p-xylene	mg/kg	0.2	<0.2	<0.2	200	0
			o-xylene	mg/kg	0.1	<0.1	<0.1	200	0
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	<0.1	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	9.2	50	1
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.7	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	9.7	50	2
		Totals	Total BTEX*	mg/kg	0.6	<0.6	<0.6	200	0
			Total Xylenes*	mg/kg	0.3	<0.3	<0.3	200	0

Volatile Petroleum Hydrocarbons in Soil

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

Original	Duplicate		Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE264609.003	LB311352.014		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.8	8.9	50	9
			d8-toluene (Surrogate)	mg/kg	-	9.3	8.5	50	9
			Bromofluorobenzene (Surrogate)	mg/kg	-	10.3	9.4	50	9
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0
SE264609.011	LB311352.027		TRH C6-C10	mg/kg	25	<25	<25	200	0
			TRH C6-C9	mg/kg	20	<20	<20	200	0
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.4	9.2	50	1
			d8-toluene (Surrogate)	mg/kg	-	8.9	8.7	50	2
			Bromofluorobenzene (Surrogate)	mg/kg	-	9.9	9.7	50	2
		VPH F Bands	Benzene (F0)	mg/kg	0.1	<0.1	<0.1	200	0
			TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	<25	200	0

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

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

Mercury in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311356.002	Mercury	mg/kg	0.05	0.23	0.2	80 - 120	116

OC Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311350.002		Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	120
		Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	119
		Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	122
		Dieldrin	mg/kg	0.2	0.2	0.2	60 - 140	118
		Endrin	mg/kg	0.2	0.2	0.2	60 - 140	113
		p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	110
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.17	0.15	40 - 130	110

OP Pesticides in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311350.002		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.2	2	60 - 140	112
		Diazinon (Dimpylate)	mg/kg	0.5	2.3	2	60 - 140	116
		Dichlorvos	mg/kg	0.5	1.9	2	60 - 140	94
		Ethion	mg/kg	0.2	2.0	2	60 - 140	100
	Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	114
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311350.002		Naphthalene	mg/kg	0.1	5.0	4	60 - 140	126
		Acenaphthylene	mg/kg	0.1	5.1	4	60 - 140	128
		Acenaphthene	mg/kg	0.1	5.2	4	60 - 140	130
		Phenanthrene	mg/kg	0.1	5.1	4	60 - 140	127
		Anthracene	mg/kg	0.1	5.5	4	60 - 140	137
		Fluoranthene	mg/kg	0.1	5.1	4	60 - 140	128
		Pyrene	mg/kg	0.1	4.8	4	60 - 140	121
		Benzo(a)pyrene	mg/kg	0.1	5.6	4	60 - 140	139
	Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	108
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.5	40 - 130	114
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100

PCBs in Soil

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311350.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	112

Speciated Phenols in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311349.002		Phenol	mg/kg	0.5	1.2	1	70 - 130	122
		2,4-dichlorophenol	mg/kg	0.5	1.0	1	70 - 130	100
		2,4,6-trichlorophenol	mg/kg	0.5	1.0	1	70 - 130	104
		Pentachlorophenol	mg/kg	0.5	1.3	1	70 - 130	126
	Surrogates	2,4,6-Tribromophenol (Surrogate)	mg/kg	-	6.1	5	40 - 130	121
		d5-phenol (Surrogate)	mg/kg	-	2.4	2	40 - 130	118

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

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

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311354.002	Arsenic, As	mg/kg	1	310	318.22	80 - 120	99
	Cadmium, Cd	mg/kg	0.3	4.7	4.81	70 - 130	98
	Chromium, Cr	mg/kg	0.5	42	38.31	80 - 120	110
	Copper, Cu	mg/kg	0.5	300	290	80 - 120	103
	Nickel, Ni	mg/kg	0.5	180	187	80 - 120	97
	Lead, Pb	mg/kg	1	89	89.9	80 - 120	100
	Zinc, Zn	mg/kg	2	270	273	80 - 120	97

TRH (Total Recoverable Hydrocarbons) in Soil

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

Sample Number	Parameter	Units	LOR

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

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

TRH (Total Recoverable Hydrocarbons) in Soil (continued)

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311350.002		TRH C10-C14	mg/kg	20	38	40	60 - 140	96
		TRH C15-C28	mg/kg	45	<45	40	60 - 140	92
		TRH C29-C36	mg/kg	45	<45	40	60 - 140	76
	TRH F Bands	TRH >C10-C16	mg/kg	25	38	40	60 - 140	96
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	84
		TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	74

VOC's in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311352.002	Monocyclic	Benzene	mg/kg	0.1	3.5	5	60 - 140	70
	Aromatic	Toluene	mg/kg	0.1	3.9	5	60 - 140	79
		Ethylbenzene	mg/kg	0.1	4.0	5	60 - 140	80
		m/p-xylene	mg/kg	0.2	8.1	10	60 - 140	81
		o-xylene	mg/kg	0.1	4.1	5	60 - 140	83
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		d8-toluene (Surrogate)	mg/kg	-	9.1	10	70 - 130	91
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89

Volatile Petroleum Hydrocarbons in Soil

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

Sample Number		Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB311352.002		TRH C6-C10	mg/kg	25	65	92.5	60 - 140	70
		TRH C6-C9	mg/kg	20	53	80	60 - 140	66
	Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	9.5	10	70 - 130	95
		Bromofluorobenzene (Surrogate)	mg/kg	-	8.9	10	70 - 130	89
	VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	41	62.5	60 - 140	65

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

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

OC Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004		Alpha BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	<0.1	-	-
			Beta BHC	mg/kg	0.1	<0.1	<0.1	-	-
			Lindane (gamma BHC)	mg/kg	0.1	<0.1	<0.1	-	-
			Delta BHC	mg/kg	0.1	0.3	<0.1	0.2	125
			Heptachlor	mg/kg	0.1	0.3	<0.1	0.2	127
			Aldrin	mg/kg	0.1	0.3	<0.1	0.2	126
			Isodrin	mg/kg	0.1	<0.1	<0.1	-	-
			Heptachlor epoxide	mg/kg	0.1	<0.1	<0.1	-	-
			Gamma Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Chlordane	mg/kg	0.1	<0.1	<0.1	-	-
			Alpha Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDE*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDE	mg/kg	0.1	<0.1	<0.1	-	-
			Dieldrin	mg/kg	0.2	0.2	<0.2	0.2	118
			Endrin	mg/kg	0.2	0.2	<0.2	0.2	115
			Beta Endosulfan	mg/kg	0.2	<0.2	<0.2	-	-
			o,p'-DDD*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDD	mg/kg	0.1	<0.1	<0.1	-	-
			Endrin aldehyde	mg/kg	0.1	<0.1	<0.1	-	-
			Endosulfan sulphate	mg/kg	0.1	<0.1	<0.1	-	-
			o,p'-DDT*	mg/kg	0.1	<0.1	<0.1	-	-
			p,p'-DDT	mg/kg	0.1	0.2	<0.1	0.2	105
			Endrin ketone	mg/kg	0.1	<0.1	<0.1	-	-
			Methoxychlor	mg/kg	0.1	<0.1	<0.1	-	-
			Mirex	mg/kg	0.1	<0.1	<0.1	-	-
			trans-Nonachlor	mg/kg	0.1	<0.1	<0.1	-	-
			Total CLP OC Pesticides	mg/kg	1	1	<1	-	-
			Total OC VIC EPA	mg/kg	1	1	<1	-	-
		Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.18	0.18	-	117

OP Pesticides in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	<0.2	-	-
			Bromophos Ethyl	mg/kg	0.2	<0.2	<0.2	-	-
			Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.5	<0.2	2	124
			Diazinon (Dimpylate)	mg/kg	0.5	2.6	<0.5	2	131
			Dichlorvos	mg/kg	0.5	2.1	<0.5	2	106
			Dimethoate	mg/kg	0.5	<0.5	<0.5	-	-
			Ethion	mg/kg	0.2	2.6	<0.2	2	127
			Fenitrothion	mg/kg	0.2	<0.2	<0.2	-	-
			Malathion	mg/kg	0.2	<0.2	<0.2	-	-
			Methidathion	mg/kg	0.5	<0.5	<0.5	-	-
			Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	<0.2	-	-
			Total OP Pesticides*	mg/kg	1.7	9.8	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.6	-	115
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004	Naphthalene	mg/kg	0.1	5.1	0.1	4	126
		2-methylnaphthalene	mg/kg	0.1	0.8	0.9	-	-
		1-methylnaphthalene	mg/kg	0.1	0.8	0.8	-	-
		Acenaphthylene	mg/kg	0.1	5.0	<0.1	4	123
		Acenaphthene	mg/kg	0.1	5.1	0.1	4	124
		Fluorene	mg/kg	0.1	0.3	0.3	-	-
		Phenanthrene	mg/kg	0.1	6.1	0.6	4	137
		Anthracene	mg/kg	0.1	5.8	0.2	4	141 ④
		Fluoranthene	mg/kg	0.1	6.1	0.4	4	141 ④
		Pyrene	mg/kg	0.1	5.2	0.5	4	120
		Benzo(a)anthracene	mg/kg	0.1	0.4	0.2	-	-
		Chrysene	mg/kg	0.1	0.5	0.2	-	-

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

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

PAH (Polynuclear Aromatic Hydrocarbons) in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004		Benzo(b&j)fluoranthene	mg/kg	0.1	0.5	0.2	-	-
			Benzo(k)fluoranthene	mg/kg	0.1	0.2	0.1	-	-
			Benzo(a)pyrene	mg/kg	0.1	5.4	0.2	4	132
			Indeno(1,2,3-cd)pyrene	mg/kg	0.1	0.3	0.1	-	-
			Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	<0.1	-	-
			Benzo(ghi)perylene	mg/kg	0.1	0.2	0.1	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=0*	TEQ (mg/kg)	0.2	5.6	0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR/2*	TEQ (mg/kg)	0.2	5.6	0.3	-	-
			Carcinogenic PAHs, BaP TEQ <LOR=LOR*	TEQ (mg/kg)	0.3	5.7	0.4	-	-
			Total PAH (18)	mg/kg	0.8	48	5.0	-	-
		Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.6	0.6	-	117
			2-fluorobiphenyl (Surrogate)	mg/kg	-	0.6	0.6	-	115
			d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	-	96

PCBs in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004		Arochlor 1016	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1221	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1232	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1242	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1248	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1254	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1260	mg/kg	0.2	0.4	<0.2	0.4	107
			Arochlor 1262	mg/kg	0.2	<0.2	<0.2	-	-
			Arochlor 1268	mg/kg	0.2	<0.2	<0.2	-	-
			Total PCBs (Arochlors)	mg/kg	1	<1	<1	-	-
		Surrogates	TCMX (Surrogate)	mg/kg	-	0	0	-	117

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

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311354.004		Arsenic, As	mg/kg	1	51	4	50	93
			Cadmium, Cd	mg/kg	0.3	45	<0.3	50	90
			Chromium, Cr	mg/kg	0.5	59	8.0	50	102
			Copper, Cu	mg/kg	0.5	73	29	50	88
			Nickel, Ni	mg/kg	0.5	53	3.9	50	99
			Lead, Pb	mg/kg	1	450	470	50	-51 ⑤
			Zinc, Zn	mg/kg	2	170	120	50	93

TRH (Total Recoverable Hydrocarbons) in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311350.004		TRH C10-C14	mg/kg	20	290	320	40	-62 ⑨
			TRH C15-C28	mg/kg	45	610	680	40	-174 ⑨
			TRH C29-C36	mg/kg	45	250	260	40	-11 ⑨
			TRH C37-C40	mg/kg	100	<100	110	-	-
			TRH C10-C36 Total	mg/kg	110	1200	1300	-	-
			TRH >C10-C40 Total (F bands)	mg/kg	210	1200	1400	-	-
		TRH F Bands	TRH >C10-C16	mg/kg	25	400	450	40	-119 ⑨
			TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	400	450	-	-
			TRH >C16-C34 (F3)	mg/kg	90	640	710	40	-183 ⑨
			TRH >C34-C40 (F4)	mg/kg	120	190	200	-	-

VOC's in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311352.004	Monocyclic Aromatic	Benzene	mg/kg	0.1	4.0	<0.1	5	79
			Toluene	mg/kg	0.1	4.6	<0.1	5	89
			Ethylbenzene	mg/kg	0.1	4.9	<0.1	5	99
			m/p-xylene	mg/kg	0.2	10	<0.2	10	99
			o-xylene	mg/kg	0.1	5.1	<0.1	5	101
		Polycyclic	Naphthalene (VOC)*	mg/kg	0.1	<0.1	0.1	-	-
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	8.5	10	101
			d8-toluene (Surrogate)	mg/kg	-	9.7	8.2	10	97
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	9.8	10	110
		Totals	Total BTEX*	mg/kg	0.6	29	<0.6	-	-

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

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

VOC's in Soil (continued)

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311352.004	Totals	Total Xylenes*	mg/kg	0.3	15	<0.3	-	-

Volatile Petroleum Hydrocarbons in Soil

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

QC Sample	Sample Number		Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE264539.001	LB311352.004		TRH C6-C10	mg/kg	25	130	<25	92.5	121 †
			TRH C6-C9	mg/kg	20	110	<20	80	122
		Surrogates	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	10.1	8.5	10	101
			d8-toluene (Surrogate)	mg/kg	-	9.7	8.2	10	97
			Bromofluorobenzene (Surrogate)	mg/kg	-	11.0	9.8	-	110
		VPH F	Benzene (F0)	mg/kg	0.1	4.0	<0.1	-	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	100	<25	62.5	134 †

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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source: Sydney.pdf page: 5 SGS Ref: SE264540_COC

1/e

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: (Y) N

Sample Temperature on Arrival: 13.2 °C

SGS EHS Sydney COC
SE264540

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	ASC NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	AHA101 0-0.1	4/22/2024	Soil	GJ								1																LEAD
	AHA101 0.2-0.3	4/22/2024	Soil	GJ																		1						
	AHA102 0-0.01	4/22/2024	Soil	GJ								1																LEAD
	AHA102 0.3-0.35	4/22/2024	Soil	GJ																		1						
	AHA103 0-0.1	4/22/2024	Soil	GJ								1																LEAD
	AHA103 0.35-0.4	4/22/2024	Soil	GJ								1																LEAD
	AHA104 0-0.1	4/22/2024	Soil	GJ								1																LEAD
	AHA104 0.35-0.4	4/22/2024	Soil	GJ																		1						
	AHA105 0-0.1	4/22/2024	Soil	GJ								1																LEAD
	AHA105 0.2-0.25	4/22/2024	Soil	GJ								1																LEAD
	AHA106 0-0.1	4/22/2024	Soil	GJ								1																LEAD
	AHA106 0.3-0.35	4/22/2024	Soil	GJ																		1						
	AHA107 0-0.1	4/22/2024	Soil	GJ								1																LEAD
4	DUP1	4/22/2024	Soil	GJ								1																LEAD
1	TRIP1	4/22/2024	Soil	GJ								1																SEND TO SGS FOR ANALYSIS
				Total								11										4						

Relinquished By:
Company:
Time:
Date:

Received By:
Company: SGS
Time: 3:05
Date: 1-5-24

Relinquished By:
Company:
Time:
Date:

Received By:
Company:
Time:
Date:

JRandall 29/4
10:54

1091634

S/E

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y/N Sample Temperature on Arrival: 13.1°C

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	ASC NEPM screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP15 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP15 0.6-0.7	4/23/2024	Soil	GJ, B & PJ																		1						
	TP15 1.1-1.2	4/23/2024	Soil	GJ, B & PJ																		1						
	TP16 0-0.1	4/23/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP16 0.5-0.6	4/23/2024	Soil	GJ, B & PJ										1								1						STD 8 METALS
	TP16 0.9-1.0	4/23/2024	Soil	GJ, B & PJ																		1						
	TP17 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP17 0.5-0.6	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP17 1-1.1	4/24/2024	Soil	GJ, B & PJ	1		1	1																			B4	
	TP18 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP18 0.4-0.5	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	TP18 0.7-0.8	4/24/2024	Soil	GJ, B & PJ																		1						
	TP19 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	DUP2	4/24/2024	Soil	GJ & PJ	1		1	1	1	1	1			1		1				1							B7A B15	STD 8 METALS
2	TRIP2	4/24/2024	Soil	GJ & PJ	1		1	1	1	1	1			1		1				1							B7A B15	PLEASE SEND TO SGS FOR ANALYSIS
				Total	10		10	10	7	7	7			10		7			5	7		5						

7/8

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: (Y) / N

Sample Temperature on Arrival: 13.1°C

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes – Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenicls - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR	ASC NEPM Screen (pH, CEC, Iron, Clay)	Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	AHA107 0.35-0.4	4/22/2024	Soil	GJ																		1							
	AHA108 0.02-0.1	4/22/2024	Soil	GJ								1																	LEAD
	AHA108 0.35-0.4	4/22/2024	Soil	GJ																		1							
	AHA109 0-0.1	4/22/2024	Soil	GJ								1																	LEAD
	AHA109 0.35-0.4	4/22/2024	Soil	GJ																		1							
	AHA110 0-0.1	4/22/2024	Soil	GJ								1																	LEAD
	AHA110 0.25-0.3	4/22/2024	Soil	GJ																		1							
	AHA111 0-0.1	4/24/2024	Soil	GJ								1																	LEAD
	DUP4	4/24/2024	Soil	GJ								1																	LEAD
3	TRIP4	4/24/2024	Soil	GJ								1																	PLEASE SEND TO SGS FOR ANALYSIS
	AHA111 0.4-0.5	4/24/2024	Soil	GJ																		1							
	AHA112 0-0.1	4/24/2024	Soil	GJ								1																	LEAD
	AHA112 0.4-0.5	4/24/2024	Soil	GJ																		1							
	AHA113 0-0.1	4/24/2024	Soil	GJ								1																	LEAD
	AHA113 0.1-0.2	4/24/2024	Soil	GJ								1																	LEAD
				Total								9										6							

76/E

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Callum Laker**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec Rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: (Y) / N
Sample Temperature on Arrival: 13.1 °C

Notes:

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar – PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial – GV)	Analytes – Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (excl. Hg)	HM8 - Metals (incl. Hg)	Cr6)	Phenols - Speciated	VOCs	SVOC	Asbestos in Soil (NEPM)	PFAS Short Suite - Std LOR		Hold	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	TP19 0.3-0.4	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	TP19 0.4-0.5	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	TP19 0.8-0.9	4/24/2024	Soil	GJ, B & PJ															1			1						
	TP19 1.2-1.3	4/24/2024	Soil	GJ, B & PJ																		1						
	TP20 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP20 0.4-0.5	4/24/2024	Soil	GJ, B & PJ															1			1						
	TP20 0.7-0.8	4/24/2024	Soil	GJ, B & PJ																		1						
	TP21 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1	1	1	1			1		1			1	1							B7A B15	STD 8 METALS
	TP21 0.5-0.6	4/24/2024	Soil	GJ, B & PJ																		1						
	TP21 1-1.1	4/24/2024	Soil	GJ, B & PJ																		1						
	TP/HA22 0-0.1	4/24/2024	Soil	GJ, B & PJ	1		1	1						1					1								B7	STD 8 METALS
	DUP3	4/24/2024	Soil	GJ & PJ	1		1	1						1													B7	STD 8 METALS
	TRIP3	4/24/2024	Soil	GJ & PJ	1		1	1						1													B7	PLEASE SEND TO SGS FOR ANALYSIS
	TP/HA22 0.2-0.3	4/24/2024	Soil	GJ, B & PJ	1		1	1						1													B7	STD 8 METALS
	RIN12/4/24	4/22/2024	Water	2 x PB, 2 x VB, 1 x GJ								1							1									LEAD
				Total	8		8	8	2	2	2	1		8		2			8	2		6						

SAMPLE RECEIPT ADVICE

SE264540

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights**
Order Number	**304100928**
Samples	4

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Wed 1/5/2024
Report Due	Wed 8/5/2024
SGS Reference	**SE264540**

SUBMISSION DETAILS

This is to confirm that 4 samples were received on Wednesday 1/5/2024. Results are expected to be ready by COB Wednesday 8/5/2024.
Please quote SGS reference SE264540 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	4 Soil	Type of documentation received	COC
Date documentation received	1/5/2024	Samples received in good order	Yes
Samples received without headspace	Yes	Sample temperature upon receipt	13.1°C
Sample container provider	Other Lab	Turnaround time requested	Standard
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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SAMPLE RECEIPT ADVICE

SE264540

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 Gilleston Heights

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	Speciated Phenols in Soil	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
002	Trip2	30	14	26	11	18	10	11	7
004	Trip3	-	-	26	-	-	10	11	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

SAMPLE RECEIPT ADVICE

SE264540

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 Gilleston Heights

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury in Soil	Moisture Content	Per- and Polyfluoroalkyl Substances (PFAS) in	Total Recoverable Elements in Soil/Waste
001	Trip1	-	1	-	1
002	Trip2	1	1	23	7
003	Trip4	-	1	-	1
004	Trip3	1	1	-	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights - PFAS**
Order Number	**304100928**
Samples	2

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735A R0**
Date Received	13/6/2024
Date Reported	19/6/2024

COMMENTS

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

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No. ME353419

SIGNATORIES

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples [MA-1523] Tested: 19/6/2024

PARAMETER	UOM	LOR	SED TRIP1 SOIL - 29/4/2024 SE266735A.002
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	<0.0008
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	<0.0016

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level [MA-1523] Tested: 19/6/2024

PARAMETER	UOM	LOR	TRIP1-W WATER - 29/4/2024 SE266735A.001
Perfluorobutanoic acid (PFBA)	µg/L	0.0005	**0.0031**
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	**0.0029**
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	**0.0038**
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.0005
Perfluorooctanoic Acid (PFOA)	µg/L	0.0005	**0.0010**
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.001
Perfluorodecanoic acid (PFDA)	µg/L	0.001	<0.001
Perfluoroundecanoic acid (PFUnA)	µg/L	0.001	<0.001
Perfluorododecanoic acid (PFDoA)	µg/L	0.001	<0.001
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001	<0.001
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001	<0.001
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.002	<0.002
Perfluorobutane sulfonate (PFBS)	µg/L	0.001	<0.001
Perfluoropentane sulfonate (PFPeS)	µg/L	0.001	<0.001
Perfluorohexane sulfonate (PFHxS)	µg/L	0.0002	**0.0003**
Perfluoroheptane sulfonate (PFHpS)	µg/L	0.0002	<0.0002
Perfluorooctane sulfonate (PFOS)	µg/L	0.0002	**0.0011**
Sum of PFHxS and PFOS	µg/L	0.0002	**0.0013**
Perfluorononane sulfonate (PFNS)	µg/L	0.0005	<0.0005
Perfluorodecane sulfonate (PFDS)	µg/L	0.0005	<0.0005
Perfluorododecane sulfonate (PFDoS)	µg/L	0.0005	<0.0005
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	µg/L	0.0005	<0.0005
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	µg/L	0.0005	<0.0005
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	µg/L	0.0005	<0.0005
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.002	<0.002
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	µg/L	0.0025	<0.0025
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	µg/L	0.0025	<0.0025
2-(N-Methylperfluorooctane sulfonamido)-ethanol	µg/L	0.0025	<0.0025
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	µg/L	0.0025	<0.0025
N-Methylperfluorooctanesulfonamidoacetic acid	µg/L	0.0025	<0.0025
N-Ethylperfluorooctanesulfonamidoacetic Acid	µg/L	0.0025	<0.0025
Total PFAS (n=30)	µg/L	0.006	**0.012**

METHOD	METHODOLOGY SUMMARY
MA-1523	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts, determined as the total of linear and branched isomers. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE266735A R0

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights - PFAS**
Order Number	**304100928**
Samples	2

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735A R0**
Date Received	13 Jun 2024
Date Reported	19 Jun 2024

COMMENTS

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

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

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

Surrogate	Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level	1 item

SAMPLE SUMMARY

Sample counts by matrix	1 Soil, 1 Water	Type of documentation received	COC
Date documentation received	13/6/2024	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Three Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE266735A R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

No holding time data is available for this job.

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

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

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	103
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	78
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	99
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	100
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	93
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	158 †
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	104
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	100
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	101
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	100
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	102
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	102
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	113
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	87
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	89
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	89
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	91
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	105
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	129
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	112
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	103
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	99
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	114
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	TRIP1-W	SE266735A.001	%	10 - 150%	112

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples

Method: MA-1523

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	101
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	104
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	91
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	98
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	107
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	95
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	103
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	SED TRIP1	SE266735A.002	%	0 - 150%	103

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

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

No method blanks were required for this job.

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

No duplicates were required for this job.

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

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

No laboratory control standards were required for this job.

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

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

No matrix spikes were required for this job.

MATRIX SPIKE DUPLICATES

SE266735A R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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SGS EHS Alexandria Laboratory

SE266735A COC
Received: 13 – Jun – 2024

#1092003

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: Irem Haskara
Email: ContamNSW@cardno.com.au
Mobile: 417493692

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com ; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N
Sample Temperature on Arrival: ~~15.7°~~ 9.3

Notes: 2 metals bottles provided for water samples - Please filter one sample and conduct metal analsyls for Total and Dissolved

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar – PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6)	Phenols - Speciated	PCB	SVOC	PFAS Short Suite - Std LOR	TRH - TRACE LEVEL	PAH - TRACE LEVEL	OCP - TRACE LEVEL	OPP - TRACE LEVEL	PFAS - TRACE LEVEL	METALS - TRACE LEVEL	PCB - TRACE LEVEL	Applicable Suites	Sample Comments
	SW1	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
	DUP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
1	TRIP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		SEND TO SGS FOR ANALYSIS
	SED1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	STD 8 METALS
	SED DUP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	STD 8 METALS
2	SED TRIP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1								B7A B15	SEND TO SGS FOR ANALYSIS
	RIN29/4/24	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
				Total	3		7	3	3	3	3			3		3	3		3	4		4	4					

Relinquished By: Brock Collinson
Company:
Time:
Date:

Received By: JRandall
Company:
Time: 30/4
Date: 2020

Relinquished By:
Company:
Time:
Date:

Received By: ~~[illegible]~~
Company: Stantec
Time: 2:45
Date: 17-4-24 @ 2.45pm

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ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS		LABORATORY DETAILS	
Contact	Huong Crawford	Manager	Adam Atkinson
Client	SGS I&E HSE SYDNEY	Laboratory	SGS Melbourne EH&S
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Project	**304100928 Gilleston Heights - PFAS**	SGS Reference	**ME353419 R0**
Order Number	**SE266735A**	Date Received	17 Jun 2024
Samples	2	Date Reported	19 Jun 2024

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562 (14420/22793/24472).

MA1523: Majority of surrogate recoveries within acceptance criteria.

SIGNATORIES

Andrew WRIGHT
LC/VOC Team Leader

Susan WAN
Senior Chemist

Parameter	Units	LOR	Sample Number: ME353419.001 Sample Matrix: Water Sample Date: 29 Apr 2024 Sample Name: SE266735A.001	Sample Number: ME353419.002 Sample Matrix: Soil Sample Date: 29 Apr 2024 Sample Name: SE266735A.002
Moisture Content Method: AN002 Tested: 18/6/2024				
% Moisture	%w/w	1	-	**21.5**
Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level Method: MA-1523 Tested: 18/6/2024				
Perfluorobutanoic acid (PFBA)	µg/L	0.0005	**0.0031**	-
Perfluoropentanoic acid (PFPeA)	µg/L	0.0005	**0.0029**	-
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005	**0.0038**	-
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005	<0.0005	-
Perfluorooctanoic Acid (PFOA)	µg/L	0.0005	**0.0010**	-
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.001	-
Perfluorodecanoic acid (PFDA)	µg/L	0.001	<0.001	-
Perfluoroundecanoic acid (PFUnA)	µg/L	0.001	<0.001	-
Perfluorododecanoic acid (PFDoA)	µg/L	0.001	<0.001	-
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001	<0.001	-
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001	<0.001	-
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.002	<0.002	-
Perfluorobutane sulfonate (PFBS)	µg/L	0.001	<0.001	-
Perfluoropentane sulfonate (PFPeS)	µg/L	0.001	<0.001	-
Perfluorohexane sulfonate (PFHxS)	µg/L	0.0002	**0.0003**	-
Perfluoroheptane sulfonate (PFHpS)	µg/L	0.0002	<0.0002	-
Perfluorooctane sulfonate (PFOS)	µg/L	0.0002	**0.0011**	-
Sum of PFHxS and PFOS	µg/L	0.0002	**0.0013**	-
Perfluorononane sulfonate (PFNS)	µg/L	0.0005	<0.0005	-
Perfluorodecane sulfonate (PFDS)	µg/L	0.0005	<0.0005	-
Perfluorododecane sulfonate (PFDoS)	µg/L	0.0005	<0.0005	-
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	µg/L	0.0005	<0.0005	-
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	µg/L	0.0005	<0.0005	-
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	µg/L	0.0005	<0.0005	-
Perfluorooctane sulfonamide (PFOSA)	µg/L	0.002	<0.002	-
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	µg/L	0.0025	<0.0025	-
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	µg/L	0.0025	<0.0025	-
2-(N-Methylperfluorooctane sulfonamido)-ethanol	µg/L	0.0025	<0.0025	-
2-(N-Ethylperfluorooctane sulfonamido)-ethanol	µg/L	0.0025	<0.0025	-
N-Methylperfluorooctanesulfonamidoacetic acid	µg/L	0.0025	<0.0025	-
N-Ethylperfluorooctanesulfonamidoacetic Acid	µg/L	0.0025	<0.0025	-
Total PFAS (n=30)	µg/L	0.006	**0.012**	-
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	**100**	-
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	**113**	-
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	**102**	-
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	**102**	-
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	**101**	-
(13C9-PFNA) Isotopically Labelled Internal Recovery	%	-	**105**	-
(13C6-PFDA) Isotopically Labelled Internal Recovery	%	-	**87**	-
(13C7-PFUdA) Isotopically Labelled Internal Recovery	%	-	**89**	-
(13C2-PFDoA) Isotopically Labelled Internal Recovery	%	-	**93**	-
(13C2_PFTeDA) Isotopically Labelled Internal Recovery	%	-	**103**	-
(13C2-PFHxDA) Isotopically Labelled Internal Recovery	%	-	**158**	-
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	**104**	-
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	**100**	-
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	**89**	-
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery	%	-	**78**	-
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery	%	-	**99**	-
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery	%	-	**100**	-
(13C8-PFOSA) Isotopically Labelled Internal Recovery	%	-	**91**	-
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery	%	-	**129**	-
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery	%	-	**103**	-
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery	%	-	**114**	-
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery	%	-	**112**	-
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery	%	-	**112**	-

Parameter	Units	LOR	Sample Number: ME353419.001 Sample Matrix: Water Sample Date: 29 Apr 2024 Sample Name: SE266735A.001	Sample Number: ME353419.002 Sample Matrix: Soil Sample Date: 29 Apr 2024 Sample Name: SE266735A.002
Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level Method: MA-1523 Tested: 19/6/2024 (continued)				
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery	%	-	**99**	-
Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523 Tested: 18/6/2024				
Perfluorobutanoic acid (PFBA)	mg/kg	0.0016	-	<0.0016
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0016	-	<0.0016
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0016	-	<0.0016
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0016	-	<0.0016
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0008	-	<0.0008
Perfluorobutane sulfonate (PFBS)	mg/kg	0.0016	-	<0.0016
Perfluoropentane sulfonate (PFPeS)	mg/kg	0.0016	-	<0.0016
Perfluorohexane sulfonate (PFHxS)	mg/kg	0.0016	-	<0.0016
Perfluoroheptane sulfonate (PFHpS)	mg/kg	0.0016	-	<0.0016
Perfluorooctane sulfonate (PFOS)	mg/kg	0.0016	-	<0.0016
Sum PFOS and PFHXS	mg/kg	0.0016	-	<0.0016
Perfluorononane sulfonate (PFNS)	mg/kg	0.0016	-	<0.0016
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	mg/kg	0.0016	-	<0.0016
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	mg/kg	0.0016	-	<0.0016
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	mg/kg	0.0016	-	<0.0016
(13C4-PFBA) Isotopically Labelled Internal Recovery	%	-	-	**98**
(13C5-PFPeA) Isotopically Labelled Internal Recovery	%	-	-	**103**
(13C5-PFHxA) Isotopically Labelled Internal Recovery	%	-	-	**95**
(13C4-PFHpA) Isotopically Labelled Internal Recovery	%	-	-	**107**
(13C4_PFOA) Isotopically Labelled Internal Recovery	%	-	-	**91**
(13C3-PFBS) Isotopically Labelled Internal Recovery	%	-	-	**101**
(13C3-PFHxS) Isotopically Labelled Internal Recovery	%	-	-	**104**
(13C8-PFOS) Isotopically Labelled Internal Recovery	%	-	-	**103**

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

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

Parameter	QC Reference	Units	LOR	DUP %RPD
% Moisture	LB076674	%w/w	1	8%

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level Method: MA-1523

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Perfluorobutanoic acid (PFBA)	LB076668	µg/L	0.0005	<0.0005	13%	NA
Perfluoropentanoic acid (PFPeA)	LB076668	µg/L	0.0005	<0.0005	2%	NA
Perfluorohexanoic acid (PFHxA)	LB076668	µg/L	0.0005	<0.0005	1%	NA
Perfluoroheptanoic acid (PFHpA)	LB076668	µg/L	0.0005	<0.0005	0%	108%
Perfluorooctanoic Acid (PFOA)	LB076668	µg/L	0.0005	<0.0005	16%	119%
Perfluorononanoic acid (PFNA)	LB076668	µg/L	0.001	<0.001	0%	132%
Perfluorodecanoic acid (PFDA)	LB076668	µg/L	0.001	<0.001	0%	121%
Perfluoroundecanoic acid (PFUnA)	LB076668	µg/L	0.001	<0.001	0%	98%
Perfluorododecanoic acid (PFDoA)	LB076668	µg/L	0.001	<0.001	0%	125%
Perfluorotridecanoic acid (PFTrDA)	LB076668	µg/L	0.001	<0.001	0%	106%
Perfluorotetradecanoic acid (PFTeDA)	LB076668	µg/L	0.001	<0.001	0%	110%
Perfluorohexadecanoic acid (PFHxDA)	LB076668	µg/L	0.002	<0.002	0%	NA
Perfluorobutane sulfonate (PFBS)	LB076668	µg/L	0.001	<0.001	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB076668	µg/L	0.001	<0.001	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB076668	µg/L	0.0002	<0.0002	13%	NA
Perfluoroheptane sulfonate (PFHpS)	LB076668	µg/L	0.0002	<0.0002	0%	NA
Perfluorooctane sulfonate (PFOS)	LB076668	µg/L	0.0002	<0.0002	8%	142%
Sum of PFHxS and PFOS	LB076668	µg/L	0.0002	<0.0002	4%	NA
Perfluorononane sulfonate (PFNS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
Perfluorodecane sulfonate (PFDS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
Perfluorododecane sulfonate (PFDoS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB076668	µg/L	0.0005	<0.0005	0%	NA
Perfluorooctane sulfonamide (PFOSA)	LB076668	µg/L	0.002	<0.002	0%	90%
N-Methylperfluorooctane sulfonamide (N-MeFOSA)	LB076668	µg/L	0.0025	<0.0025	0%	NA
N-Ethylperfluorooctane sulfonamide (N-EtFOSA)	LB076668	µg/L	0.0025	<0.0025	0%	NA
2-(N-Methylperfluorooctane sulfonamido)-ethanol (N-MeFOSE)	LB076668	µg/L	0.0025	<0.0025	0%	NA
2-(N-Ethylperfluorooctane sulfonamido)-ethanol (N-EtFOSE)	LB076668	µg/L	0.0025	<0.0025	0%	NA
N-Methylperfluorooctanesulfonamidoacetic acid (N_MeFOSAA)	LB076668	µg/L	0.0025	<0.0025	0%	NA
N-Ethylperfluorooctanesulfonamidoacetic Acid (N-EtFOSAA)	LB076668	µg/L	0.0025	<0.0025	0%	NA
Total PFAS (n=30)	LB076668	µg/L	0.006	<0.0060		
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	102%	1%	101%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	101%	0%	102%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	122%	3%	90%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	119%	8%	98%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	117%	3%	99%
(13C9-PFNA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	104%	8%	93%
(13C6-PFDA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	85%	14%	99%
(13C7-PFUdA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	94%	18%	127%
(13C2-PFDoA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	88%	15%	119%
(13C2_PFTeDA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	78%	20%	127%
(13C2-PFHxDA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	77%	3%	70%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	96%	6%	96%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	94%	4%	128%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	108%	4%	96%
(13C2-4:2 FTS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	119%	12%	107%
(13C2-6:2 FTS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	131%	15%	130%
(13C2-8:2 FTS) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	104%	21%	136%
(13C8-PFOSA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	102%	5%	83%
(D3-N-MeFOSA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	86%	18%	78%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Aqueous Samples - Low Level Method: MA-1523 (continued)

				MB	DUP %RPD	LCS %Recovery
(D5-N-EtFOSA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	71%	9%	64%
(D7-N-MeFOSE) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	100%	23%	84%
(D9-N-EtFOSE) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	110%	14%	92%
(D3-N-MeFOSAA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	112%	10%	84%
(D5-N-EtFOSAA) Isotopically Labelled Internal Recovery Standard	LB076668	%	-	98%	0%	84%

MB blank results are compared to the Limit of Reporting
LCS and MS spike recoveries are measured as the percentage of analyte recovered from the sample compared the the amount of analyte spiked into the sample.
DUP and MSD relative percent differences are measured against their original counterpart samples according to the formula : *the absolute difference of the two results divided by the average of the two results as a percentage.* Where the DUP RPD is 'NA' , the results are less than the LOR and thus the RPD is not applicable.

Per- and Polyfluoroalkyl Substances (PFAS) in Solid Samples Method: MA-1523

Parameter	QC Reference	Units	LOR	MB	DUP %RPD	LCS %Recovery
Perfluorobutanoic acid (PFBA)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentanoic acid (PFPeA)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexanoic acid (PFHxA)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptanoic acid (PFHpA)	LB076667	mg/kg	0.0016	<0.0016	0%	79%
Perfluorooctanoic Acid (PFOA)	LB076667	mg/kg	0.0008	<0.0008	0%	96%
Perfluorobutane sulfonate (PFBS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluoropentane sulfonate (PFPeS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluorohexane sulfonate (PFHxS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluoroheptane sulfonate (PFHpS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluorooctane sulfonate (PFOS)	LB076667	mg/kg	0.0016	<0.0016	0%	150%
Sum PFOS and PFHXS	LB076667	mg/kg	0.0016	<0.0016	0%	NA
Perfluorononane sulfonate (PFNS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorohexane sulfonate (4:2) (4:2 FTS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorooctane sulfonate (6:2) (6:2 FTS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
1H,1H,2H,2H-Perfluorodecane sulfonate (8:2) (8:2 FTS)	LB076667	mg/kg	0.0016	<0.0016	0%	NA
(13C4-PFBA) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	100%	2%	98%
(13C5-PFPeA) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	102%	0%	100%
(13C5-PFHxA) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	97%	8%	85%
(13C4-PFHpA) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	104%	2%	95%
(13C4_PFOA) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	100%	0%	88%
(13C3-PFBS) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	96%	5%	106%
(13C3-PFHxS) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	99%	3%	113%
(13C8-PFOS) Isotopically Labelled Internal Recovery Standard	LB076667	%	-	88%	17%	119%

METHOD	METHODOLOGY SUMMARY
AN002	The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
MA-1523	This method covers the analysis of per- and polyfluoroalkyl substances (PFAS) in aqueous, solid and biosolid samples and solvent extracts. After spiking with isotopically labelled quantification surrogates and clean-up via SPE cartridges sample extracts are analysed by liquid chromatography/mass spectrometry (LC-MS/MS). PFAS concentrations are determined by isotope dilution quantification. PFOS and PFHXS are determined as the sum of linear and branched isomers.

FOOTNOTES

IS	Insufficient sample for analysis.	LOR	Limit of Reporting
LNR	Sample listed, but not received.	↑↓	Raised or Lowered Limit of Reporting
*	NATA accreditation does not cover the performance of this service.	QFH	QC result is above the upper tolerance
		QFL	QC result is below the lower tolerance
**	Indicative data, theoretical holding time exceeded.	-	The sample was not analysed for this analyte
***	Indicates that both * and ** apply.	NVL	Not Validated

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

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

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

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

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

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

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

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

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SAMPLE RECEIPT ADVICE

SE266735A

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights - PFAS**
Order Number	**304100928**
Samples	2

LABORATORY DETAILS

Manager	Huong Crawford
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Thu 13/6/2024
Report Due	Tue 18/6/2024
SGS Reference	**SE266735A**

SUBMISSION DETAILS

This is to confirm that 2 samples were received on Thursday 13/6/2024. Results are expected to be ready by COB Tuesday 18/6/2024.
Please quote SGS reference SE266735A when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Soil, 1 Water	Type of documentation received	COC
Date documentation received	13/6/2024	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Three Days
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

PFAS subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.

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SAMPLE RECEIPT ADVICE

SE266735A

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 Gilleston Heights - PFAS

SUMMARY OF ANALYSIS

No.	Sample ID	Per- and Polyfluoroalkyl Substances (PFAS) in	Per- and Polyfluoroalkyl Substances (PFAS) in
001	TRIP1-W	56	-
002	SED TRIP1	-	23

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

CHAIN OF CUSTODY RECORD

COC#: SE266735A

Owner job:

Ship to: XML	Project Name:	Due date: 18/06/2024 2:45:19 PM
	Client: STANTEC AUSTRALI F700101_LIQ102_17880909	Send Results to: AUENVSE
	Sampler Name: Client	
Carrier:	Airbill #:	

Field Sample ID	Client ID	Date sampling	Time	Matrix	# of Containers	Analyses Requested										Comments
						152301	1523LL	ZME_PFAS_SHORT								
SE266735A.001	TRIP1-W	29/04/2024	0:00:00	Water			X									
SE266735A.002	SED TRIP1	29/04/2024	0:00:00	Soil		X		X								

SGS Alexandria Environmental

SE266735A SUBCON

Received: 13 – Jun – 2024

Sample Condition Upon Receipt at Laboratory:	Cooler temperature:
Special Instructions/Comments: Job Booked by:- Emily 13/6/24 Loggin Checked by:	

#1 Released by: (Sig)	Date:	#2 Released by: (Sig)	Date:	#3 Released by: (Sig)	Date:
Company Name:	Time	Company Name:	Time	Company Name:	Time
#1 Received by: (Sig)	Date	#2 Received by: (Sig)	Date	#3 Received by: (Sig)	Date
Company Name:	Time:	Company Name.	Time:	Company Name:	Time:

source:SE_Autoscan.pdf page:1 SGS Ref:SE266735A_SUBCON

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735B R0**
Date Received	17/6/2024
Date Reported	18/6/2024

COMMENTS

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

SIGNATORIES



Kamrul AHSAN

Senior Chemist

Trace Metals (Dissolved) in Water by ICPMS [AN318] Tested: 18/6/2024

PARAMETER	UOM	LOR	SW1 WATER - 29/4/2024 SE266735B.003
Arsenic	µg/L	1	**1**
Cadmium	µg/L	0.1	<0.1
Copper	µg/L	1	**2**
Chromium	µg/L	1	<1
Nickel	µg/L	1	**1**
Lead	µg/L	1	**2**
Zinc	µg/L	5	**18**

Mercury (dissolved) in Water [AN311(Perth)/AN312] Tested: 18/6/2024

PARAMETER	UOM	LOR	SW1 WATER - 29/4/2024 SE266735B.003
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
AN020	Unpreserved water sample is filtered through a 0.45µm membrane filter and acidified with nitric acid similar to APHA3030B.
AN311(Perth)/AN312	Mercury by Cold Vapour AAS in Waters: Mercury ions are reduced by stannous chloride reagent in acidic solution to elemental mercury. This mercury vapour is purged by nitrogen into a cold cell in an atomic absorption spectrometer or mercury analyser. Quantification is made by comparing absorbances to those of the calibration standards. Reference APHA 3112/3500.
AN318	Determination of elements at trace level in waters by ICP-MS technique,, referenced to USEPA 6020B and USEPA 200.8 (5.4).

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE266735B R0

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735B R0**
Date Received	17 Jun 2024
Date Reported	18 Jun 2024

COMMENTS

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

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

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

Extraction Date	Mercury (dissolved) in Water	1 item
Analysis Date	Mercury (dissolved) in Water	1 item

SAMPLE SUMMARY

Sample counts by matrix	1 Water	Type of documentation received	Email
Date documentation received	17/6/2024@11:38AM	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Next Day
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE266735B R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Mercury (dissolved) in Water

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

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SW1	SE266735B.003	LB315181	29 Apr 2024	17 Jun 2024	27 May 2024	18 Jun 2024†	27 May 2024	18 Jun 2024†

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
SW1	SE266735B.003	LB315257	29 Apr 2024	17 Jun 2024	26 Oct 2024	18 Jun 2024	26 Oct 2024	18 Jun 2024

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

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

No surrogates were required for this job.

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

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

Mercury (dissolved) in Water — Method: ME-(AU)-[ENV]AN311(Perth)/AN312

Sample Number	Parameter	Units	LOR	Result
LB315181.001	Mercury	mg/L	0.0001	<0.0001

Trace Metals (Dissolved) in Water by ICPMS — Method: ME-(AU)-[ENV]AN318

Sample Number	Parameter	Units	LOR	Result
LB315257.001	Arsenic	µg/L	1	<1
	Cadmium	µg/L	0.1	<0.1
	Chromium	µg/L	1	<1
	Copper	µg/L	1	<1
	Lead	µg/L	1	<1
	Nickel	µg/L	1	<1
	Zinc	µg/L	5	<5

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Mercury (dissolved) in Water

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

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE266743.009	LB315181.014	Mercury	µg/L	0.0001	-0.01	-0.014	200	0
SE266833.012	LB315181.021	Mercury	µg/L	0.0001	0.024	-0.018	200	199

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE266743.009	LB315257.014	Arsenic	µg/L	1	1.04672261	0.96074274	115	5
		Cadmium	µg/L	0.1	0.01307579	0.01157312	200	0
		Copper	µg/L	1	0.5116406	0.46095512	200	0
		Lead	µg/L	1	-0.01580925	-0.00867867	200	0
		Nickel	µg/L	1	0.71838071	0.72958921	153	0
		Zinc	µg/L	5	-0.08432916	-0.23020793	200	0
SE266745.004	LB315257.020	Arsenic	µg/L	1	0.031162	0.03805404	200	0
		Cadmium	µg/L	0.1	9.38E-005	0.00010471	200	0
		Chromium	µg/L	1	-0.00094151	-0.02871232	200	0
		Copper	µg/L	1	-0.14518425	-0.14226646	200	0
		Lead	µg/L	1	-0.04104688	-0.04186883	200	0
		Nickel	µg/L	1	-0.10053238	-0.09730281	200	0
		Zinc	µg/L	5	-0.75085793	-0.7706198	200	0

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

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

Trace Metals (Dissolved) in Water by ICPMS — **Method: ME-(AU)-[ENV]AN318**

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB315257.002	Arsenic	µg/L	1	19	20	80 - 120	96
	Cadmium	µg/L	0.1	20	20	80 - 120	100
	Chromium	µg/L	1	21	20	80 - 120	104
	Copper	µg/L	1	21	20	80 - 120	105
	Lead	µg/L	1	21	20	80 - 120	104
	Nickel	µg/L	1	20	20	80 - 120	102
	Zinc	µg/L	5	21	20	80 - 120	107

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

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

Mercury (dissolved) in Water

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

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE266735B.003	LB315181.004	Mercury	mg/L	0.0001	0.0021	<0.0001	0.008	108

Trace Metals (Dissolved) in Water by ICPMS

Method: ME-(AU)-[ENV]AN318

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE266735B.003	LB315257.004	Arsenic	µg/L	1	20	1	20	95
		Cadmium	µg/L	0.1	20	<0.1	20	99
		Chromium	µg/L	1	20	<1	20	97
		Copper	µg/L	1	21	2	20	99
		Lead	µg/L	1	23	2	20	107
		Nickel	µg/L	1	21	1	20	98
		Zinc	µg/L	5	39	18	20	106

MATRIX SPIKE DUPLICATES

SE266735B R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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SGS EHS Alexandria Laboratory

SE266735B COC

Received: 17 – Jun – 2024

#1092003

Chain of Custody

Stantec

Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Irem Haskara**
Email: ContamNSW@cardno.com.au
Mobile: **417493692**

To: Eurofins Sydney
Address:
179 Magowar Road
Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com
callum.laker@stantec.com ; brock.collinson@stantec.com

Date: 29/04/2023
TAT: 5 Days - Standard
Purchase Order: 304100928
Laboratory Quote ID: Stantec rates
Project number: 304100928
Project name: Gilleston Heights
Data output format: PDF, Esdat

Attempt to chill evident: Y / N
Sample Temperature on Arrival: ~~15.7°~~ 9.3

Notes: 2 metals bottles provided for water samples - Please filter one sample and conduct metal analsyis for Total and Dissolved

Laboratory Sample Number	Cardno Sample Number	Sample Date	Matrix	Container (Plastic Tube – PT, Bag – B, Petri Dish – PD, Plastic Bottle – PB, Plastic Jar - PJ, Glass Jar – GJ, Glass Bottle – GB, Glass Vial - GV)	Analytes: Single Analytes: TRH	TRH w/ Silica Gel	BTEXN	PAHS	OCP	OPP	PCB	Lead	M7 - Metals (exc. Hg)	M8 - Metals (inc. Hg)	Cr6	Phenols - Speciated	PCB	SVOC	PFAS Short Suite - Std LOR	TRH - TRACE LEVEL	PAH - TRACE LEVEL	OCP - TRACE LEVEL	OPP - TRACE LEVEL	PFAS - TRACE LEVEL	METALS - TRACE LEVEL	PCB - TRACE LEVEL	Applicable Suites	Sample Comments
3	SW1	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
4	DUP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		STD 8 METALS
1	TRIP1-W	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1		SEND TO SGS FOR ANALYSIS
	SED1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1									B7A B15	STD 8 METALS
	SED DUP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1									B7A B15	STD 8 METALS
2	SED TRIP1	4/29/2024	Soil	GJ, PJ	1		1	1	1	1	1			1		1	1		1									B7A B15	SEND TO SGS FOR ANALYSIS
	RIN29/4/24	4/29/2024	Water	GV, GB, PB			1													1		1	1	1	1	1			STD 8 METALS
				Total	3		7	3	3	3	3			3		3	3		3	4		4	4						

Relinquished By: Brock Collinson
Company:
Time:
Date:

Received By: JRandall
Company:
Time: 30/4 800
Date:

Relinquished By:
Company:
Time:
Date:

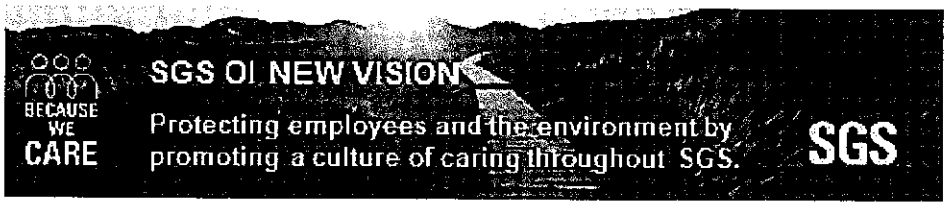
Received By: ~~[illegible]~~
Company: Seaf
Time: 2:45
Date: 17-6-24 @ 2.45

source:SE_Autoscan.pdf page:1 SGS Ref: SE266735B_COC

SGS Australia Pty Ltd
Unit 16, 33 Maddox St
Alexandria NSW 2015

Phone: +61 2 8594 0400
Email: matthew.tyler@sgs.com
Visit: https://www.sgs.com/en-au

How did we go? Your feedback helps us to improve.



From: Laker, Callum <callum.laker@stantec.com>
Sent: Monday, June 17, 2024 11:38 AM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@SGS.com>; Collinson, Brock <Brock.Collinson@stantec.com>; Contam NSW <ContamNSW@stantec.com>
Cc: Blencowe, Mitch <mitch.blencowe@stantec.com>; Miguel Barritt, Elsa (Alexandria) <Elsa.MiguelBarritt@sgs.com>
Subject: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

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

Hi,

Could I please get dissolved metals analysis done for samples SW1 and DUP1-W.
Could this be completed ASAP.

Please call if there are any issues.

Cheers

Cal

Callum Laker
Senior Environmental Geoscientist

Direct: +61 2 8448 1869
Mobile: 0488 706 367
callum.laker@stantec.com

Stantec
Level 9, The Forum, 203 Pacific Highway
Sydney NSW 2065
AUSTRALIA

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Please consider the environment before printing this email.

Yin, Emily (Alexandria)

From: AU.Environmental.Sydney, AU (Sydney)
Sent: Monday, 17 June 2024 3:22 PM
To: AU.SampleReceipt.Sydney, AU (Sydney)
Cc: AU.Environmental.Sydney, AU (Sydney)
Subject: FW: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

Hi SR team.

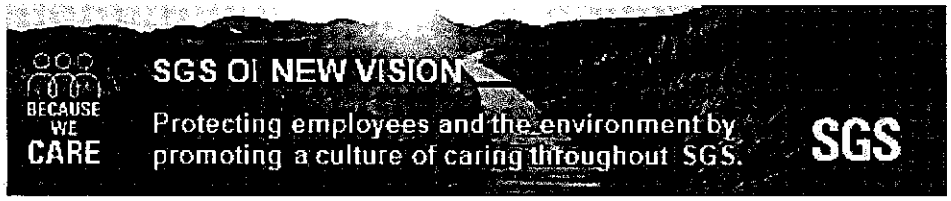
Please book in urgent B job for metals. I've asked Melbourne, and they still have the sample sent down for PFAS, so please book in 8HM(Dissolved) for both the bottle we still have here, and the bottle sent down as 2 separate samples, and then XML the latter down to Melbourne for reporting tomorrow.
Thanks.

Matthew Tyler
Industries & Environment
Client Services Officer

SGS Australia Pty Ltd
Unit 16, 33 Maddox St
Alexandria NSW 2015

Phone: +61 2 8594 0400
Email: matthew.tyler@sgs.com
Visit: https://www.sgs.com/en-au

How did we go? Your feedback helps us to improve.



From: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Sent: Monday, June 17, 2024 12:16 PM
To: Laker, Callum <callum.laker@stantec.com>
Cc: Blencowe, Mitch <mitch.blencowe@stantec.com>; Miguel Barritt, Elsa (Alexandria) <Elsa.MiguelBarritt@sgs.com>; AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>; Collinson, Brock <Brock.Collinson@stantec.com>; Contam NSW <ContamNSW@stantec.com>
Subject: RE: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

Hi Callum.

No worries. We can book this in for you as an additional testing job.
Please confirm that you're after just the standard 8HM?

Matthew Tyler
Industries & Environment
Client Services Officer

SAMPLE RECEIPT ADVICE

SE266735B

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 17/6/2024
Report Due	Tue 18/6/2024
SGS Reference	**SE266735B**

SUBMISSION DETAILS

This is to confirm that 3 samples were received on Monday 17/6/2024. Results are expected to be ready by COB Tuesday 18/6/2024. Please quote SGS reference SE266735B when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Water	Type of documentation received	Email
Date documentation received	17/6/2024@11:38AM	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Next Day
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

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

SAMPLE RECEIPT ADVICE

SE266735B

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 Gilleston Heights -Metals

SUMMARY OF ANALYSIS

No.	Sample ID	Mercury (dissolved) in Water	Trace Metals (Dissolved) in Water by ICPMS
003	SW1	1	7

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735C R0**
Date Received	17/6/2024
Date Reported	19/6/2024

COMMENTS

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

TRIP1-W/DUP1-W subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420. Report No. ME353419A

SIGNATORIES

Dissolved Metals in Water by ICPMS [MA-1400.WW.09] Tested: 19/6/2024

PARAMETER	UOM	LOR	TRIP1-W WATER - 29/4/2024 SE266735C.001
Arsenic	mg/L	0.0005	**0.0013**
Cadmium	mg/L	0.00005	<0.00005
Chromium	mg/L	0.0005	**0.0006**
Copper	mg/L	0.001	**0.002**
Nickel	mg/L	0.0005	**0.0015**
Lead	mg/L	0.0002	**0.0003**
Zinc	mg/L	0.001	**0.013**
Mercury	mg/L	0.0001	<0.0001

METHOD	METHODOLOGY SUMMARY
MA-1400.09	Filtered sample is acidified and analysed by ICP-MS.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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STATEMENT OF QA/QC PERFORMANCE

SE266735C R0

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
SGS Reference	**SE266735C R0**
Date Received	17 Jun 2024
Date Reported	19 Jun 2024

COMMENTS

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

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

All Data Quality Objectives were met (within the SGS Alexandria Environmental laboratory).

SAMPLE SUMMARY

Sample counts by matrix	1 Water	Type of documentation received	Email
Date documentation received	17/6/2024@11:38AM	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Next Day
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

HOLDING TIME SUMMARY

SE266735C R0

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

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

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

No holding time data is available for this job.

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

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

No surrogates were required for this job.

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

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

No method blanks were required for this job.

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

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

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

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

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

No duplicates were required for this job.

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

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

No laboratory control standards were required for this job.

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

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

No matrix spikes were required for this job.

MATRIX SPIKE DUPLICATES

SE266735C R0

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: RPD = | OriginalResult - ReplicateResult | x 100 / Mean

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

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

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

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifer when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

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

*	NATA accreditation does not cover the performance of this service.
**	Indicative data, theoretical holding time exceeded.
***	Indicates that both * and ** apply.
-	Sample not analysed for this analyte.
IS	Insufficient sample for analysis.
LNR	Sample listed, but not received.
LOR	Limit of reporting.
QFH	QC result is above the upper tolerance.
QFL	QC result is below the lower tolerance.
①	At least 2 of 3 surrogates are within acceptance criteria.
②	RPD failed acceptance criteria due to sample heterogeneity.
③	Results less than 5 times LOR preclude acceptance criteria for RPD.
④	Recovery failed acceptance criteria due to matrix interference.
⑤	Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
⑥	LOR was raised due to sample matrix interference.
⑦	LOR was raised due to dilution of significantly high concentration of analyte in sample.
⑧	Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
⑨	Recovery failed acceptance criteria due to sample heterogeneity.
⑩	LOR was raised due to high conductivity of the sample (required dilution).
†	Refer to relevant report comments for further information.

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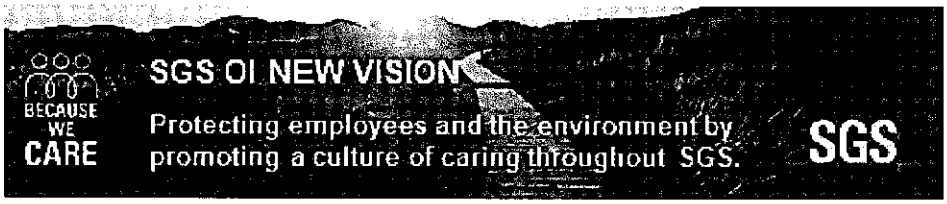
This test report shall not be reproduced, except in full.

source: SE_Autoscan.pdf page: 1 SGS Ref: SE266735C_COC

SGS Australia Pty Ltd
Unit 16, 33 Maddox St
Alexandria NSW 2015

Phone: +61 2 8594 0400
Email: matthew.tyler@sgs.com
Visit: https://www.sgs.com/en-au

How did we go? Your feedback helps us to improve.



From: Laker, Callum <callum.laker@stantec.com>
Sent: Monday, June 17, 2024 11:38 AM
To: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@SGS.com>; Collinson, Brock <Brock.Collinson@stantec.com>; Contam NSW <ContamNSW@stantec.com>
Cc: Blencowe, Mitch <mitch.blencowe@stantec.com>; Miguel Barritt, Elsa (Alexandria) <Elsa.MiguelBarritt@sgs.com>
Subject: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

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

Hi,

Could I please get dissolved metals analysis done for samples SW1 and DUP1-W.
Could this be completed ASAP.

Please call if there are any issues.

Cheers

Cal

SGS EHS Alexandria Laboratory

SE266735C COC
Received: 17 – Jun – 2024

Callum Laker
Senior Environmental Geoscientist

Direct: +61 2 8448 1869
Mobile: 0488 706 367
callum.laker@stantec.com

Stantec
Level 9, The Forum, 203 Pacific Highway
Sydney NSW 2065
AUSTRALIA

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Please consider the environment before printing this email.

Yin, Emily (Alexandria)

From: AU.Environmental.Sydney, AU (Sydney)
Sent: Monday, 17 June 2024 3:22 PM
To: AU.SampleReceipt.Sydney, AU (Sydney)
Cc: AU.Environmental.Sydney, AU (Sydney)
Subject: FW: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

Hi SR team.

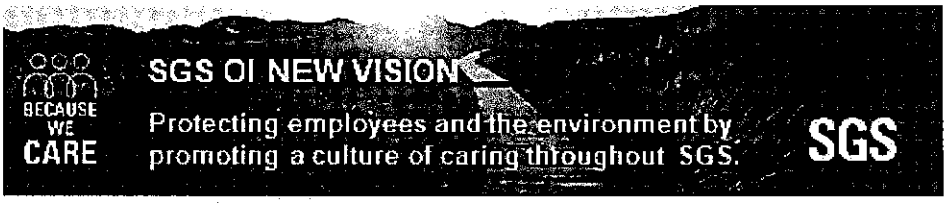
Please book in urgent B job for metals. I've asked Melbourne, and they still have the sample sent down for PFAS, so please book in 8HM(Dissolved) for both the bottle we still have here, and the bottle sent down as 2 separate samples, and then XML the latter down to Melbourne for reporting tomorrow.
Thanks.

Matthew Tyler
Industries & Environment
Client Services Officer

SGS Australia Pty Ltd
Unit 16, 33 Maddox St
Alexandria NSW 2015

Phone: +61 2 8594 0400
Email: matthew.tyler@sgs.com
Visit: https://www.sgs.com/en-au

How did we go? Your feedback helps us to improve.



From: AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>
Sent: Monday, June 17, 2024 12:16 PM
To: Laker, Callum <callum.laker@stantec.com>
Cc: Blencowe, Mitch <mitch.blencowe@stantec.com>; Miguel Barritt, Elsa (Alexandria) <Elsa.MiguelBarritt@sgs.com>; AU.Environmental.Sydney, AU (Sydney) <AU.Environmental.Sydney@sgs.com>; Collinson, Brock <Brock.Collinson@stantec.com>; Contam NSW <ContamNSW@stantec.com>
Subject: RE: [EXTERNAL] RE: Report Job SE266735, your reference 304100928 Gilleston Heights, order number 304100928

Hi Callum.

No worries. We can book this in for you as an additional testing job.
Please confirm that you're after just the standard 8HM?

Matthew Tyler
Industries & Environment
Client Services Officer

ANALYTICAL REPORT

Accreditation No. 2562

CLIENT DETAILS

Contact	Huong Crawford
Client	SGS I&E HSE SYDNEY
Address	Unit 16, 33 Maddox Street Alexandria NSW 2015
Telephone	02 8594 0400
Facsimile	02 8594 0499
Email	au.environmental.sydney@sgs.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**SE266735C**
Samples	3

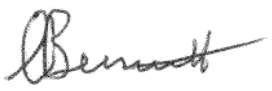
LABORATORY DETAILS

Manager	Adam Atkinson
Laboratory	SGS Melbourne EH&S
Address	10/585 Blackburn Road Notting Hill Victoria 3168
Telephone	+61395743200
Facsimile	+61395743399
Email	Au.SampleReceipt.Melbourne@sgs.com
SGS Reference	**ME353419A R0**
Date Received	17/6/2024
Date Reported	19/6/2024

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562 (14420/22793/24472).

SIGNATORIES



Christopher BENNETT
Team Leader (Inorganics/Metals)

Dissolved Metals in Water by ICPMS [MA-1400.WW.09] Tested: 19/6/2024

PARAMETER	UOM	LOR	SE266735C.001 WATER - 29/4/2024 ME353419A.001
Arsenic	mg/L	0.0005	**0.0013**
Cadmium	mg/L	0.00005	<0.00005
Chromium	mg/L	0.0005	**0.0006**
Copper	mg/L	0.001	**0.002**
Lead	mg/L	0.0002	**0.0003**
Mercury	mg/L	0.0001	<0.0001
Nickel	mg/L	0.0005	**0.0015**
Zinc	mg/L	0.001	**0.013**

METHOD	METHODOLOGY SUMMARY
MA-1400.09	Filtered sample is acidified and analysed by ICP-MS.

FOOTNOTES

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

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

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

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

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

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

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

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

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

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SAMPLE RECEIPT ADVICE

SE266735C

CLIENT DETAILS

Contact	Callum Laker
Client	STANTEC AUSTRALIA PTY LTD
Address	Level 9, The Forum, 203 Pacific Highway St Leonards NSW 2065
Telephone	61 2 9024 7072
Facsimile	(Not specified)
Email	callum.laker@stantec.com
Project	**304100928 Gilleston Heights -Metals**
Order Number	**304100928**
Samples	3

LABORATORY DETAILS

Manager	Shane McDermott
Laboratory	SGS Alexandria Environmental
Address	Unit 16, 33 Maddox St Alexandria NSW 2015
Telephone	+61 2 8594 0400
Facsimile	+61 2 8594 0499
Email	au.environmental.sydney@sgs.com
Samples Received	Mon 17/6/2024
Report Due	Tue 18/6/2024
SGS Reference	**SE266735C**

SUBMISSION DETAILS

This is to confirm that 3 samples were received on Monday 17/6/2024. Results are expected to be ready by COB Tuesday 18/6/2024. Please quote SGS reference SE266735C when making enquiries. Refer below for details relating to sample integrity upon receipt.

Sample counts by matrix	1 Water	Type of documentation received	Email
Date documentation received	17/6/2024@11:38AM	Samples received in good order	Yes
Samples received without headspace	**No**	Sample temperature upon receipt	9.3°C
Sample container provider	Other Lab	Turnaround time requested	Next Day
Samples received in correct containers	Yes	Sufficient sample for analysis	Yes
Sample cooling method	Ice Bricks	Samples clearly labelled	Yes
Complete documentation received	Yes		

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

COMMENTS

TRIP1-W/DUP1-W subcontracted to SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420.

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SAMPLE RECEIPT ADVICE

SE266735C

CLIENT DETAILS

Client STANTEC AUSTRALIA PTY LTD

Project 304100928 Gilleston Heights -Metals

SUMMARY OF ANALYSIS

No.	Sample ID	Dissolved Metals in Water by ICPMS
001	TRIP1-W	8

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details .
Testing as per this table shall commence immediately unless the client intervenes with a correction .

CHAIN OF CUSTODY RECORD

COC#: SE266735C

Owner job:

Ship to: XML	Project Name:	Due date: 6/18/2024 11:38:50 AM
	Client: STANTEC AUSTRALI F700101_LIQ102_17880909	Send Results to: AUENVSE
	Sampler Name: Client	
Carrier:	Airbill #:	

Field Sample ID	Client ID	Date sampling	Time	Matrix	# of Containers	Analyses Requested										Comments
						MA1400W										
SE266735C.001	TRIP1-W	4/29/2024	0:00:00	Water		X										

SGS Alexandria Environmental

SE266735C SUBCON

Received: 17 – Jun – 2024

Sample Condition Upon Receipt at Laboratory:	Cooler temperature:
Special Instructions/Comments: Job Booked by:- Emily 17/6/24 Loggin Checked by:	

#1 Released by: (Sig)	Date:	#2 Released by: (Sig)	Date:	#3 Released by: (Sig)	Date.
Company Name:	Time	Company Name:	Time	Company Name:	Time
#1 Received by: (Sig)	Date	#2 Received by: (Sig)	Date	#3 Received by: (Sig)	Date
Company Name:	Time:	Company Name:	Time:	Company Name:	Time:

source:SE_Autoscan.pdf page:1 SGS Ref:SE266735C_SUBCON

APPENDIX G – BOREHOLE LOGS

APPENDIX H – DATA QUALITY ASSESSMENT

Assessment of Field Quality Data

Field data quality assessment for this DSI is summarised in **Table 13-1**.

Table 13-1 Assessment of Field Data Quality

QAQC Measure	Field Quality Indicator	Conformance Comments
Precision: A quantitative measure of the variability (or reproducibility) of data.	SOPs are appropriate and complied with.	Yes.
	Field duplicates and Blind field duplicates are collected and analysed at a rate of 5% (1 per 20 samples).	Yes, Refer to Section **13.2**
	Use of calibrated equipment.	Yes.
Accuracy: A quantitative measure of the closeness of reported data to the "true" value.	SOPs are appropriate and complied with.	Yes.
	Use of calibrated equipment.	Yes.
	Field interlaboratory duplicates sampled and analysed at a rate of 1 per 20 samples.	Yes, Refer to Section **13.2**
	<30% Relative Percentage Difference (RPD)	Refer to Table 4 and 5 **Appendix E** **Soil and sediment**: Select samples exceeded the 30% RPD value for analytes including metals and PAHs. These RPD exceedances are inferred to be associated with soil heterogeneity. **Water:** Select samples exceeded the 30% RPD value for analytes including metals. RPD exceedances of metals and PFAS were minor and Stantec infer that these exceedances will not impact the outcome of this assessment.
	Analysis of rinsate sample collected at rate of 1 per day.	Yes
Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on site and the conditions encountered in the field	Appropriate media sampled.	Yes.
	Preservation and storage of samples upon collection and during transport to the laboratory occurs.	Yes.
	Sampling is undertaken by an experienced sampler.	Yes.
Completeness: A measure of the amount of useable data from the	All critical locations sampled.	Yes.
	All samples collected (from grid and at depth).	All samples collected as per agreed scope of works.

data collected during the fieldwork program	Standard operating practices (SOPs) appropriate and complied with.	Yes.
	Sampling is undertaken by an experienced sampler.	Yes.
	Suitable records of field work are documented.	Yes.
	Completed laboratory sample chain-of-custody and documentation.	Yes. See Appendix G
Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Same SOP is used on each field occasion.	Yes.
	Climatic conditions are documented.	Yes.
	Experienced sampler	Yes.
	Sample type, preservation and handling are consistent at sampling events.	Yes.
	Use of calibrated equipment.	Yes.

A summary of the field QA/QC processes undertaken during this investigation is provided below in **Table 13-2.**

Table 13-2 Summary of QA/QC Processes

Requirement	Comments
Equipment calibration	Yes, a calibrated Photoionization Detector was used and bump tested at the beginning of each day.
Equipment decontamination	Yes
Soil logging	Logging soils in general accordance with the *Australian Standard Geotechnical Site Investigations (AS1726-2017)* including sample information recording on the geological log sheets.
Sample media identification	Samples marked with a unique identifier including project number, sample location, depth and date.
QA/QC	Duplicate samples collected at a rate of 1 every 20 primary samples completed at the primary intra-laboratory; and triplicate samples at a rate of 1 every 20 samples to be analysed at the secondary inter-laboratory for soil. Duplicate and triplicate samples for PFAS collected at a rate of 1:10 samples. Surface water and sediment samples for inter-laboratory were only reported for metals and PFAS due to errors when transporting inter-lab samples.
Sample preservation	Collected soil samples placed in a chilled icebox with ice for storage and transport to the laboratory.
Chain of custody (COC documentation	COC forms detailing sample identification, collection date, sampler and laboratory analysis required. The COC form was signed off and returned to Stantec by the laboratory staff upon receipt of all the samples.

NATA-accredited methods	NATA-accredited laboratories analysed the samples in accordance with NATA accredited methods where applicable.

A summary of all field QA/QC samples is provided in **Table 13-3** below:

Table 13-3 Field QA/QC Collection Summary

Environmental Media	Date	Primary	Duplicate	Triplicate
Soil	22/04/2024	AHA107	DUP1	TRIP1
	24/04/2024	TP19	DUP2	TRIP2
	24/04/2024	TP/HA22	DUP3	TRIP3
	24/04/2024	AHA111	DUP4	TRIP4
Sediment	29/04/2024	SED1	SED DUP1	SED TRIP1
Surface Water	29/04/2024	SW1	DUP1-W	TRIP1-W

Replicate sampling rates are summarised in **Table 13-4**.

Table 13-4 Replicate Sampling Rates

Analyte Category	Number of Primary Samples	Number of Duplicate Samples	Number of Triplicate Samples	Replicate Ratio
Metals (Lead)	58	4	4	29:2:2
TRH, BTEX, PAH, Metals (As, Cd, Cr, Cu, Ni, Hg, Pb, Zn), OCP, OPP, Phenols	43	3	3	43:3:3
PFAS	20	2	2	10:1:1

Laboratory Data Quality Assessment

Laboratory data quality assessment is summarised in **Table 13-5**.

Table 13-5 Assessment of Laboratory Data Quality

QAQC Measure	Laboratory Quality Indicator	Conformance Comments
Precision: A quantitative measure of the variability (or reproducibility) of data.	Analysis of laboratory duplicates	Yes. See Appendix F
Accuracy: A quantitative measure of the closeness of reported data to the "true" value.	Laboratory holds NATA-accreditation for the analyses.	Yes. See Appendix F
	Laboratory limit of reporting is below the adopted investigation level.	Part. As discussed in Section 8.3.2, the following analytes were reported above applicable ANZG (2018 Sediment Quality DGV screening criteria: Chlordane, DDD, Dieldrin, Endrin and PCBs.

		The absence of these contaminants at concentrations above LOR in soil or surface water samples both historically and the current investigation indicate a low and acceptable risk to the validity of the data and a low ecological risk.
	Analysis of field blank	Yes. See Appendix F
	Analysis of rinsate blank	Yes. See Appendix E
	Analysis of method blanks	Yes. See Appendix F
	Analysis of matrix spikes (MS)	Yes. See Appendix F
	Analysis of matrix spike duplicates (MSD) Acceptable RPD value threshold of 30%	Part. The following parameters from Eurofins report 1091634 were identified as outliers: • Arsenic (92%), Chromium (98%), Zinc (43%) • TRH (C29-C36) (35%). The following parameters from Eurofins report 1092003 were identified as outliers: • Nickel (34%) However, the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report in Appendix F.
	Analysis of surrogate spikes	Part. The following parameters from SGS report SE266735A were identified as outliers: • 13C2-PFHxDA) (158%) SGS provided the following comment: "Recovery failed acceptance criteria due to matrix interference".
	Laboratory spikes: 70-130% recovery for metals 60-140% for organics Laboratory duplicates. If contaminant concentration is: < 10 x PQL, no RPD limit 10-20 x PQL, RPD is 0% to 50% >20 x PQL, RPD is 0% to 20%	Part. The following parameters from SGS report no. SE264540 were identified as outliers: • Anthracene (141%, Fluoranthene (141%), • TRH C10-C14 (62%), TRH C15-C28 (174%), TRH C29-C36 (11%), TRH>C10-C16 (119%), TRH>C16-C34 (183%), TRH C6-C10 (121%), TRH C6-C10 (F1) (134%).

		SGS provided the following comment: "Recovery failed acceptance criteria due to matrix interference".
	Laboratory surrogates: 60-140% recovery.	Yes. See Appendix F
	Laboratory blanks: <PQL	Yes. See Appendix F
	Laboratory control samples, 70-130% recovery	Yes. See Appendix F
Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on site and the conditions encountered in the field.	RPD values have been calculated and reviewed. Unacceptable RPD values have been assessed and commentary provided.	Yes. See **Table 13-1** above.
	Rinsate samples results have analytical results <LOR.	Yes. See Appendix E
	All key samples analysed.	Yes.
	Analysis of laboratory-prepared volatile trip spikes and trip blanks.	Yes See Appendix E.
Completeness: A measure of the amount of useable data from the data collected during the fieldwork program	All critical samples analysed according to SAQP and proposal	Yes.
	All CoPCs analysed.	Yes. See Appendix F.
	Appropriate methods and PQLs implemented.	Part. As discussed in Section 8.3.2, the following analytes were reported above applicable ANZG (2018 Sediment Quality DGV screening criteria: Chlordane, DDD, Dieldrin, Endrin and PCBs. The absence of these contaminants at concentrations above LOR in soil or surface water samples both historically and the current investigation indicate a low and acceptable risk to the validity of the data and a low ecological risk.
	Sample documentation is complete.	Yes. See Appendix F
	Samples were analysed within holding times.	Yes. See Appendix F
Comparability: The confidence (expressed qualitatively) that data may be considered to be equivalent for each sampling and analytical event	Same sample analytical methods used.	Yes. See Appendix F
	Same sample PQLs	Part. The primary lab and secondary lab use different PQLs for some analytes.
	Same laboratories are used and justification is given where differences occur.	Yes. See Appendix F

	Same units of measurement are used.	Yes. See Appendix F

Summary of Project QA/QC

The sampling (including decontamination, preservation and transport procedures) and laboratory methods adopted for this Detailed Site Investigation were mostly consistent with NEPM, EPA and Stantec protocols and met the DQOs for this project. Some minor discrepancies were identified; however, they were not considered to be detrimental to the overall validity of the final data set. Where non-conformance, or variability, in laboratory results was observed, it could be attributed to the heterogeneous nature of the corresponding (soil and sediment) samples, matrix interference and/or different laboratory PQL's.

It was therefore considered that the data were sufficiently precise, accurate, representative, complete and comparable, and could be relied upon for interpretation with the limitations noted