Detailed Site Investigation

Department of Education – Geotechnical & Contamination Assessment – New High School for Jordan Springs

Stantec

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Prepared by:
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Executive Summary

Stantec Australia Pty Ltd (Stantec) was engaged by Department of Education (DoE) (the client) to complete a Detailed Site Investigation (DSI) at the location of the proposed New High School for Jordan Springs, located at Corner of Infantry Street and Armoury Road, Jordan Springs NSW and legally identified as Part Lots 2 & 3 Deposited Plan (DP) 1248480.

This DSI has been prepared to accompany a Review of Environmental Factors (REF) for the proposed construction and operation of a New High School for Jordan Springs (the activity) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI).

Purpose and Objectives

The purpose of this report is to support the approval process for the proposed activities and change of land use at the site, specifically as a specialist study to inform the REF.

The objectives of this assessment and report include:

- To undertake site investigation to determine the type, extent and level of contamination for the site to provide more complete and definitive information on issues raised in the preliminary site investigation.
- Make recommendations for management, remediation and/or further investigation.
- Assess the site in consideration of Part 5 of the Environmental Planning and Assessment Act 1979, Section 5.5 Duty to consider environmental impact.

Conclusions

Upon completion of the investigation, the following conclusions were made:

- Exceedances of the applicable groundwater criteria for metals (include cadmium, copper, mercury, nickel, and zinc) were identified in the analysed sample locations (MW01, MW02, MW03 MW04 and MW05). The absence of elevated metal concentrations in the overburden soils suggests that the site soil is unlikely to be the source of groundwater contamination beneath the site. The elevated metal concentrations are believed to reflect natural background levels (e.g. cadmium), potentially associated with nearby alluvial floodplain deposits and Bringelly shale formation, located near the site. The mercury concentration in sampling location MW05 (1.1 µg/L) exceeded the adopted ecological screening criteria, which points to a possible off-site, anthropogenic source of mercury in the groundwater, given the absence of mercury detected in soil and sediment.
- PFOS exceedances of the 99% species protection criteria were reported for all analysed groundwater samples across the site, with the greatest concentrations in groundwater wells installed near to the western boundary at the highest site elevations (MW04, MW05). PFAS was not identified in any soil samples collected and analysed from within the site, and as such the contaminant is unlikely to be originating from an on-site source. Based on groundwater data, the source of PFAS in groundwater is most likely to the west of the site (off-site).

  - Based on Stantec's understanding of the proposed land use, the exceedances are not considered to pose a significant risk to on-site ecological receptors. If regionally present in groundwater, it is likely that the downgradient receiving environment would also be impacted by low levels of PFOS.
  - Under a scenario where groundwater is used for irrigation, extracted during construction, utilised during operation and/or dewatering, a complete source receptor pathway linkage may exist to ecological receivers depending on the management and fate of such waters. In this instance, further assessment would be necessary. Based on Stantec's understanding of the proposed land use, interactions with groundwater except for building piles would be unlikely.
- A highly alkaline pH was recorded in groundwater at MW05, differing to all other wells which recorded slightly to moderately acidic conditions. Monitoring well installation at MW05 utilised a coring methodology and was installed predominantly for geotechnical purposes and was opportunistically utilised for environmental assessment of groundwater conditions.
  - MW05 appears localised and would not prohibit the proposed activities. Alkaline pH readings appear to be attributed to potential grout ingress within the installed monitoring well and are unlikely to impact the validity of obtained laboratory results for this monitoring well.
- The majority of surface water samples collected from the on-site basin / dam contained dissolved copper concentrations that exceeded the adopted criteria for freshwater 95% species protection value. Given that elevated metals concentrations were not detected in soil, unacceptable impacts to ecological receptors post-construction are unlikely. Surface water samples contained PFOS concentrations above the NEMP 2.0 Table 5 Freshwater 99% value. The low level PFOS impacts in surface water may be attributable to upgradient surface water run-off and/or the PFOS identified in groundwater, which is thought to be a potential regional impact.
- There were no exceedances of applicable screening criteria for human health or ecological receptors in soil or sediment samples collected and analysed.
- Soil samples exceeding the ASSMAC (1998) thresholds were collected at BH01 (at 5m BGL), BH03 (at 4.5 m BGL and 5 m BGL), BH12 (at 5.5 m BGL) and BH202 (at 6 m BGL). An ASSMP would be required for construction if ASS is encountered and/or interacted with during construction.
- In consideration to the assumptions and limitations of the salinity risk assessment, it can be concluded that the proposed activity poses a low risk of salinisation. Therefore, a salinity management plan is not required.

From the findings of this investigation, and in consideration of historical reports, the site is considered suitable for the proposed land-use as a high school with associated ancillary infrastructure. Whilst unlikely to impact the suitability of the site, the data gaps and uncertainties identified in this report must be addressed, and the specified mitigation measures adopted.

Mitigation Measures and Recommendations

Based on the findings of this assessment and with reference to the proposed activities, purpose and objectives, the following mitigation measures are identified in **Table *15-1*** and recommendation as outlined below:

- Stantec were advised by DOE that the construction timing for the proposed development is anticipated to commence mid to late 2025, upon completion of the approvals process. Stantec recommends that groundwater levels and quality be monitored on a quarterly basis to provide a baseline on groundwater conditions prior to commencement of construction.

- The future civil works at the site should be conducted in accordance with the Construction and Environmental Management Plan (CEMP), which incorporates an Unexpected Finds Protocol (UFP), to minimise potential risks to human health and the environment during construction.
- Any material being removed from site must be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order. Any future classification must be considerate of the data and information provided in this document and other historical reports relating to contamination.

Mitigation Measures Table

Mitigation Number/ Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
Managing Potential Acid Sulfate Soils (ASS)	When ASS is to be encountered and/or interacted with during construction	Preparation of an Acid Sulfate Soil Management Plan (ASSMP) for implantation during construction, considerate of the findings of this investigation. Supplementary data may be required depending on the design parameters.	ASS, if not managed appropriately, can impact the environment and have deleterious effects on building materials.
Water quality management	Post-approval and during the design process, but prior to commencement of construction activities	Undertake quarterly groundwater level and quality monitoring to provide an understanding of baseline conditions. Consideration of surface water and groundwater properties (quality and levels) to inform the management requirements for construction.	Management options for water can vary depending on their properties. Options can only be evaluated in consideration of water conditions and the potential receiving environment.
Unexpected finds protocol	Prior to construction	An unexpected finds protocol is to be incorporated into the contractors CEMP so that previously unidentified contamination is managed appropriately. Potential unexpected finds identified as data gaps are as follows: - Previously unidentified contaminated soil due to access constraints - Potential contamination and/or salinity risk associated with	If not managed appropriately, unexpected contamination and/or soil properties can present potential health risks to human and ecological receptors and can also impact the project delivery program and budget.

		recently imported fill soils - Soils below existing hardstand, drainage channels, infrastructure and culverts	
Managing spoil proposed for offsite disposal and/or reuse.	Prior to removal to an offsite licensed facility.	Any material being removed from site must be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order. Any future classification must be considerate of the data and information provided in this document and other historical reports relating to contamination.	Negative outcomes including: • Regulatory penalties. • Health risks associated with improperly disposed soils. • Legal liabilities associated with non-compliance of waste disposal.
Changes to the proposed activities	Prior to commencement of construction activities if proposed activities need to be altered or modified.	In accordance with the Environmental Planning and Assessment Act (1979 (EP&A Act), Guidelines for Division 5.1 assessments (June 2022), any modifications will need to be assessed by either preparing a new REF document, or a REF document addendum. Section 5.4 of the EP&A Act does not require an assessment of a proposed modification in very limited circumstances – being a medication *whose environmental impact has already been considered, that will reduce its overall environmental impact.*	To ensure that proposed activities will not have a significant impact on the environment.

Evaluation of Environmental Impacts

Based on the findings of this assessment, the potential risks are not considered to have a significant effect on the environment following the implementation of the above mitigation measures (as required).

Acronyms / Abbreviations

ACM	Asbestos Containing Material
AST	Above-ground Storage Tank
BoM	Bureau of Meteorology
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CLM	Contaminated Land Management
CSM	Conceptual Site Model
DBYD	Dial Before You Dig
DQI	Data Quality Indicators
DQO	Data Quality Objectives
EIL	Ecological Investigation Level
EPA	Environments Protection Authority
ESL	Ecological Screening Level
HIL	Health Investigation Level
HSL	Health Screening Level
km	Kilometers
LEP	Local Environmental Plan
LGA	Local Government Authority
LOR	Limit of Reporting
m	Meters
mAHD	Meters Australian Height Datum
mBGL	meters Below Ground Level
NATA	National Association of Testing Authorities, Australia
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 & Heritage
OPP	Organophosphorus Pesticides
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 Policy
SPR	Source – Pathway – Receptor
SWL	Static / Standing Water Level
SWMS	Safe Work Method Statement
TfNSW	Transport for NSW
TRH	Total Recoverable Hydrocarbons
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1 Introduction

Stantec Australia Pty Ltd (Stantec) was engaged by Department of Education (DoE) (the client) to complete a Detailed Site Investigation (DSI) at the location of the proposed New High School for Jordan Springs, located at Corner of Infantry Street and Armoury Road, Jordan Springs NSW and legally identified as Part Lots 2 & 3 Lots Deposited Plan (DP) 1248480 (herein referred to as 'the site'). The site locality and layout are shown in **Figure 1** in **Appendix A**.

1.1 Background

Stantec has previously been engaged by DoE to undertake Preliminary Site Investigation (PSI) at the site, with a more detailed review of each applicable document is provided in **Section 4.1**.

The PSI was prepared to provide preliminary information on the contamination status of the site for the purpose of supporting the planning process for future activities and recommended that an intrusive investigation be prepared to assess site conditions in consideration of the proposed future land use. The proposed activities are for the construction and operation of Jordan Springs High School. A detailed description of the proposed activities is presented in **Section 2** and the design plans and bulk earthworks plans are provided in **Appendix B** and **Appendix C**, respectively. The proposed site activities broadly include the following features:

- A capacity of 1,000 students and 80 staff to meet forecast enrolment demand associated with population growth in Jordan Springs and Ropes Crossing.
- The school will provide permanent General Learning Spaces (GLS), Support Learning Spaces (SLS), staff facilities and a library across three (3), three storey buildings, a single storey hall, half playing field, three (3) outdoor sport courts, 72 operational at grade parking spaces (including two (2) accessible spaces), 100 bicycle spaces and landscaping.

1.2 Planning Pathway

This DSI has been prepared to accompany a Review of Environmental Factors (REF) for the proposed construction and operation of a New High School for Jordan Springs (the activity) under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI).

This document has been prepared in accordance with the Guidelines for Division 5.1 assessments (the Guidelines) by the Department of Planning, Housing and Infrastructure and examines and takes into account the relevant environmental factors in the Guidelines and Environmental Planning and Assessment Regulations 2021 under Section 170, Section 171 and Section 171A of the EP&A Regulation as outlined in **Table 1-1**.

Table 1-1 Summary of Relevant Section of the Part 5 Guidelines and EP&A Regulation

Regulation / Guideline Section	Requirement	Response	Report Section
3. Environmental factors	Consider factors set out in Table 1 of the Guidelines	Methodical evaluation of the factors are presented.	Section 14

1.3 Purpose and Objectives

The purpose of this report is to support the approval process for the proposed site activities and change of land use at the site, specifically as a specialist study to inform the REF.

The objectives of this assessment and report include:

- To undertake site investigation to determine the type, extent and level of contamination for the site to provide more complete and definitive information on issues raised in the preliminary site investigation.
- Make recommendations for management, remediation and/or further investigation.
- Assess the site in consideration of Part 5 of the Environmental Planning and Assessment Act 1979, Section 5.5 Duty to consider environmental impact.

1.4 Scope of Work

In consideration of the findings of the previous PSI and the proposed future land use, the scope of works below was undertaken to meet the project objectives and requirements.

1.4.1 Preliminaries

- Preparation of safety documentation and lodgement of a Before You Dig Australia (BYDA) (formerly Dial-Before-You-Dig) underground utilities enquiry.
- Preparation of a Sample and Analysis Quality Plan (SAQP) in accordance with NSW EPA (2020) to inform the purpose, objectives and scope of the proposed investigations; 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 items completed as part of the current investigation is summarized below:

- **2nd October 2024:**
  - Service locating at the locations to be subjected to ground disturbance.
  - Opportunistic soil sampling from two boreholes that were being advanced by Stantec's geotechnical team.
- **8th October 2024:**
  - Collection of nine (9) sediment samples via the use of hand-tools.

  - Surface water sampling from three (3) water bodies within the site (SW01, SW02 and SW03).
- **9th – 11th October 2024:**
  - Advancement of twelve (12) test pits and collection of soil samples throughout the soil profile.
- **10th – 11th October 2024:**
  - Advancement of thirteen (13) boreholes and collection of soil samples throughout the soil profile.
  - Conversion of five (5) boreholes into groundwater monitoring wells.
- **21st and 22nd October 2024:**
  - Development of groundwater wells following installation and in advance of sampling.
- **25th October 2024:**
  - A groundwater monitoring event was completed utilising five wells located throughout the site MW01 and MW02, MW03, MW04 and MW05.
- **8th November 2024:**
  - Survey of two (2) groundwater well locations (Environmental – MW01 & MW02).

1.4.3 Reporting

Upon completion of fieldwork and receipt of laboratory results, a Detailed Site Investigation report was prepared (this report) in general accordance with the NSW EPA Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (NSW EPA 2020), including statements on the following:

- Identification of contamination risks and constraints for the proposed activities.
- Statement of human health and / or ecological risks identified.
- Recommendations for further actions and controls.
- Preliminary information on the potential presence of acid sulfate soils.

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 other relevant 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 (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)**.**

2 Proposed activities

2.1 Proposed activities

The proposed activities at the site are for the construction of the New High School for the suburb of Jordan Springs. The proposed activities plan available at the time of preparing this document (**Appendix B**) indicate the following features:

- A capacity of 1,000 students and 80 staff to meet forecast enrolment demand associated with population growth in Jordan Springs and Ropes Crossing.
- The school will provide permanent General Learning Spaces (GLS), Support Learning Spaces (SLS), staff facilities and a library across three (3), three storey buildings, a single storey hall, half playing field, three (3) outdoor sport courts, 72 operational at grade parking spaces (including two (2) accessible spaces), 100 bicycle spaces and landscaping.
- Public domain works and the construction of a permanent off-site dam basin are to be approved under separate planning pathways and constructed by others.

The proposed activities are expected to occur under two (2) possible scenarios to allow construction and operation of the school, with (Scenario 1 – preferred option) or without (Scenario 2 – Interim Solution) the public domain works and permanent off-site basin being constructed by others under a separate planning pathway. A description of each activities' scenario is provided below.

2.1.1 Activities Scenario 1 – Preferred Option - Road Network completed and permanent OSD Basin Constructed

- External works undertaken by others to facilitate Scenario 1:
    - » Construction of Park Edge Road;
    - » Any adjustments to Infantry Street;
    - » Kiss and drop zone along Park Edge Road;
    - » Support kiss and drop zone located along Infantry Street; and
    - » Construction and operation of permanent onsite dam (OSD) basin off site.
- Scenario 1:
    - » Construction and Operation of the New High School for Jordan Springs, including:
        - – Decommissioning of existing on-site OSD basin;
        - – Earthworks;
        - – Three (3) multi-storey classroom buildings;
        - – One (1) school hall;
        - – Three (3) outdoor sport's courts;
        - – One (1) sport's field;
        - – 72 at grade car parking spaces, including two (2) accessible parking spaces, and waste services, accessed via Park Edge Road;
        - – 100 bicycle parking spaces across the site; and
        - – Landscaping.

2.1.2 Scenario 2 - Interim Solution – Road network not completed, Permanent OSD Basin not constructed

- Scenario 2 – Stage 1:
  - » Construction and operation of a temporary on-site OSD Basin;
  - » Construction and operation of the New High School for Jordan Springs, including:
    - – Earthworks;
    - – Three (3) multi-storey classroom buildings;
    - – One (1) sport's field;
    - – Temporary carpark - 72 at grade car parking spaces, including two (2) accessible parking spaces and waste services, located on the northwest corner of the site, accessed off Armoury Road;
    - – 100 bicycle parking spaces across;
    - – Temporary Kiss and drop facilities on Armoury Road; and
    - – Associated landscaping.
- Scenario 2 – Stage 2:
  - » Decommissioning of existing on-site OSD basin, prior to the following works being undertaken:
    - – 72 at grade car parking spaces, including two (2) accessible parking spaces, and waste services, located on the southeast corner of the site. This car park cannot be constructed until the decommissioning of the existing OSD basin is completed and will be non-operational with no road connection until completion of Scenario 2 – Stage 3;
    - – One (1) school hall;
    - – Three (3) outdoor sport's courts; and
    - – Associated landscaping.
- External works undertaken by others to facilitate Stage 3:
  - » Construction of Park Edge Road;
  - » Any adjustments to Infantry Street;
  - » Kiss and drop zone along Park Edge Road;
  - » Support kiss and drop zone located along Infantry Street; and
  - » Construction and operation of OSD Basin off site.
- Scenario 2 – Stage 3:
  - » Connection of the southeast carpark to Park Edge Road;
  - » Rectification works along Armoury Road to remove temporary kiss and drop facilities and cross over for temporary carpark;
  - » Demolition of temporary carpark, once permanent car park is operational; and
  - » Decommissioning of temporary OSD basin.

2.2 Activity site

The project site is located on the corner of Armoury Road and Infantry Street in Jordan Springs and is legally described as part of Lots 2 and 3 in DP 1248480.

Figure 1 provides an aerial photograph of the project site, outlines the boundaries of the project site (in red) and the boundaries of Lots 2 and 3 in DP 1248480 (in blue).



Figure 2-1 Aerial Photograph showing the proposed school boundary

The project site is within the Central Precinct of the St Marys Release Area in the Penrith Local Government Area.

2.3 Other approvals

External works and construction of the permanent off-site dam basin is to be constructed by others.

3 Site Identification

3.1 Site information

Details related to the site are included in **Table *3-1*** below and the site locality in the context of the local area is illustrated on **Figure 1** in **Appendix A**.

Table 3-1 Site Information

Details	Comments	
Site address	Corner of Infantry Street and Armoury Road, Jordan Springs NSW 2747	
Lot and Deposited Plan	Part Lots 2&3 Deposited Plan (DP) 1248480	
Landowner	The Minister for Education and Early Learning	
Local Government Authority (LGA)	Penrith City Council	
Current land use	Vacant land that includes a predominantly vegetated area with some asphalt paved streets, concrete pavement and a temporary sediment basin.	
Proposed land use	The site is proposed to be utilised as a secondary high school (Jordan Springs High School) to have the capacity of 1,00 student and 80 staff. According to Appendix B, the proposed facilities associated with the site include: • Decommissioning of existing on-site OSD basin; • Earthworks; • Landscaped areas: • Three (3) multi-storey classroom buildings; • One (1) school hall; • Three (3) outdoor sport's courts; • One (1) sport's field; • 72 at grade car parking spaces, including two (2) accessible parking spaces, and waste services, accessed via Park Edge Road; • 100 bicycle parking spaces across the site; and • External works under other facilitate: o Construction of Park Edge Road; o Any adjustments to Infantry Street; o Kiss and drop zone along Park Edge Road; o Support kiss and drop zone located along Infantry Street; and o Construction and operation of permanent OSD Basin off site. The design plans and bulk earthworks plans are provided in **Appendix B** and **Appendix C**, respectively.	
Current Zoning (Penrith Local Environmental Plan (LEP) – 2010)	UR – Urban	
Site area (ha)	4.6 ha	
Site coordinates (GDA2020 MGA56)	**Easting (m)**	**Northing (m)**
	292076.527	6265463.801
	292235.082	6265491.012
	292249.642	6265187.388

	292049.071	6265217.179

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 *3-2*.** The site and surrounding land uses are shown in **Appendix A**.

Table 3-2 Surrounding Land Use

Direction	Land Use or Activity
North	Fenced in vacant lot and fenced in Lasetter Street to the immediate north, a constructed riparian canal further to the north and medium density housing developments further beyond.
East	Open bushland to the immediate east and South Creek further beyond.
South	Fenced in vacant lot to the immediate south and medium density housing developments further beyond.
West	Armoury Road to the immediate west, medium density residential housing adjacent east, and an anthropogenic riparian canal further beyond.

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 available topographic maps for the site indicates that the site is positioned on a relatively flat plateau at approximately 20 m Australia Height Datum (AHD), situated within a generally flat to undulating greater landscape incised by creeks and gullies. The site surface is generally level and is positioned along a minor west-east sloping plane. Based on the general topography of the site, stormwater is likely to flow offsite in an easterly direction towards South Creek.
Regional Soil Landscape (NSW Department of Planning, Industry and Environment)	The NSW DPIE *eSPADE* v2.2 website indicates that the site overlies the South Creek (sc) alluvial soil landscape. Soils within the South Creek landscape consisted of an active floodplain of many drainage networks of the Cumberland Plain. Where pedogenesis has occurred, Structured Plastic Clays or Structured Loams in and immediately adjacent to drainage lines comprise of Red and Yellow Podzolic Soils are most common terraces with small areas of Structured Grey Clays, leached clays and Yellow Solodic Soils.
Regional Geology (Minview v. 2023.7.17, 2023)	A review of data gathered by Lotsearch during preparation of the PSI (Stantec, 2024) indicates that the site is underlain by alluvial floodplain deposits (Q_af) of the Quaternary geological epoch, described as comprising silt, very fine to medium grained lithic to quartz rich sand and clay.
Regional Groundwater	A search on Minview 2023.10.25 and the LotSearch (*LS049696*) report identified twenty-three (23) groundwater wells within 2000m of the site. Twelve (12) bores

Details	Comments
(Department Finance, Services & Innovation 2024) **(Bureau of Meteorology 2024)**	were listed as 'Unknown' type and status, and the remaining eleven (11) as 'monitoring' type and 'functional' status. Details of closest known wells are listed below: • GW111463 constructed on 31st March 2011, situated 892m southeast, bore type listed as 'Monitoring' and the water bearing depth is 7.02-9.18m. • GW111462 constructed on 31st March 2011, situated 990m southeast, bore type listed as 'Monitoring' and the water bearing depth is 4.46-9.77m • GW111461 constructed on 31st March 2011, situated 1029m southeast, bore type listed as 'Monitoring' and the bore depth is 11.02m.
Surface Water Bodies **(Nearmap, 2024)**	The site contains a temporary sediment basin located within the central portion of the site. Offsite towards the eastern site boundary is an ancillary and unnamed pond, understood to act as a collection point for the treated stormwater discharged from the basin mentioned above. A realigned riparian corridor extends parallel to the northern boundary of the site at approximately 70 m. It is understood that this channel flows towards South Creek, the largest natural water body in the local area, located approximately 200 m east of the site. It is anticipated that surface runoff from the site is likely to flow eastwards towards South Creek.
Acid sulfate soil / rock risk **(CSIRO, 1998 and eSPADE v2.2)**	The NSW Government Planning Industry and Environment online mapping tool, eSPADE Version 2.2 (accessed at environment.nsw.gov.au on 07.11.23), does not indicate that the site is situated within or near an ASS risk area. Furthermore, data gathered by Lotsearch indicates that the site is located within an area of extremely low probability (1 – 5% chance) of acid sulfate soils occurrence.
Salinity **(Department Finance, Services & Innovation 2024)**	No Dryland Salinity – National Assessment data on-site available.

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	02/10/2024: Overcast clearing to sunny, windy, 18°C. 08/10/2024: Overcast clearing to sunny, 14°C. 10/10/2024: Clear to sunny, 24°C. 11/10/2024: Sunny, 24°C. 25/10/2024: Sunny, 24°C. 30/10/2024: Clear to sunny, 27°C. 08/11/2024: Clear, 30°C.
Site slope and drainage features	The site is relatively level, sloping gradually towards the east along a west-east alignment. Localised areas of land subsidence were observed primarily within sections of the vacant land areas of the site, with notable surface water accumulation observed at a subsidence point situated north-east of the sediment basin.

Item	Information
	The eastern site boundary is marked by a change in elevation as the site drops from its graded raised plateau across a moderate to steep angled embankment slope adjoining the site to the neighbouring open bushland. Stormwater is likely to either flow offsite in an easterly direction towards South Creek as overland flow from unsealed vacant lots and paved roads, or be captured by the stormwater drainage system underling the road infrastructure onsite, ultimately discharging into the local council stormwater collection network.
Nearby surface water bodies	The site contains a temporary sediment basin located within the central portion of the site. An ancillary and undefined pond was situated external to the eastern site boundary and 40 m east of the sediment basin, understood to act as a collection point for the treated stormwater discharged from the basin.
Site surface coverings	Site surface coverage was variable and included: • Vacant plots with thin grass and weed cover. • Sealed haul road extending lengthwise along the eastern site boundary. • Academy street, bisecting the site longitudinally, intersected by Baralga Street, Coorabin Street and Infantry Street. The roads were observed to be unused but in good condition and featured stormwater drains and street light posts. • Concrete paved walkways in good condition, featuring nature strips containing landscaped grass cover and healthy young trees. • Sediment retention basin – observed to be at 15% capacity at the time of the inspection – at the east-central portion of the site. • Isolated areas of subsidence and surface water accumulation north-east of the sediment basin. • Lay down area containing concrete and PVC conduits, along with hardened concrete waste at the north-eastern corner of the site. • Stockpile comprising sandstone boulders and redundant chain wire fencing located at the eastern end of Baralga Street.
Surface soils	Observations of surface soils were limited to the haul road area to the east of the site, the exposed soil patches within the vacant land areas, and the exposed cross-sectional aspect of the embankment extending along the eastern boundary of the site. In general, the surface soils observed across the site appeared to comprise of compact brown gravelly clayey sand fill materials with shale fragments and sporadic patches of blue metal aggregate gravels. Anthropogenic foreign materials were also observed on the soil surfaces, and typically included concrete and ceramic fragments. No visual or olfactory indications of contamination were identified across any of the ground surfaces inspected, nor were any asbestos containing materials (ACM) observed.
Site cut and fill	The entire site is understood to have been subjected to extensive earthworks and included the importation of fill materials to regrade the site, elevating it to approximately 2-3 m above historic surface level. These works occurred as part of a Lendlease Development Application (DA) for construction of a low-density residential precinct. The Land and Environment Court (L&EC) approved of the DA on December 5th, 2019. It is understood that said earthwork activities occurred from 2021 to 2022.
Buildings and structures	No buildings or structures were observed on site with exception to paved roads and associated stormwater infrastructure.
Potential asbestos in building materials	No potential asbestos containing materials were observed at the site. It is noted that most the site's soil surfaces were covered in vegetation, thus the inspection must be considered limited.
Manufacturing, industrial, or chemical	Chemical processes and infrastructure were not observed on site or within the surrounding areas.

Item	Information
processes and infrastructure	
Fuel storage tanks (USTs/ASTs)	No above or below ground fuel storage tanks were observed at the site.
Dangerous goods	No dangerous goods were observed at the site.
Solid waste deposition	A lay down area containing concrete and PVC conduits, along with hardened concrete waste, was observed at the north-eastern corner of the site. Further to this, a stockpile comprising sandstone boulders and redundant chain wire fencing was observed at the eastern end of Baralga Street.
Liquid waste disposal features	Signage indicating the presence of live sewer lines traversing the eastern site boundary were observed.
Evidence of previous site contamination investigations	One (1) groundwater bore was observed at the south-eastern corner of the sediment basin, but it is unclear as to whether this was associated with prior contaminated land investigations.
Evidence of land contamination (staining or odours)	None observed.
Evidence of groundwater contamination	None observed.
Groundwater use	Based on observations, groundwater extraction at the site is unlikely to occur.
Vegetation	Vegetation cover at the site comprised predominantly of thin grass and weed cover across the vacant land areas. Grass covered nature strips with young trees were observed along the paved walkways.
Services	• Two (2) electrical units observed within the north-eastern and south-eastern portion of the site, presumably for electrical or comms infrastructure. • Water irrigation throughout the site.
Site fencing	The western site boundary is defined by chain wire fencing, however the northern, southern and western site boundaries are arbitrary and were not fenced at the time of the inspection.

4 Site History

A detailed site history review was undertaken as part of the PSI (Stantec, 2024) 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:

- JBS&G (2015) *Sampling Analysis and Quality Plan*, Central Precinct, Llandilo NSW, prepared for Maryland Development Company Pty Ltd. Report ref: 43352-57348 (Rev 4), dated 12 November 2015.
- ZOIC (2016) Site Audit Statement Report, for EW1, EW2, Riparian zones A, B, C Central Precinct Llandilo, NSW, prepared for Lendlease. Report ref: 14124_SAR_Final_KJL118_EW12ABC, dated 30 September 2016.
- ZOIC (2017) Site Audit Report for Earthworks Zones, EW6.1, EW6.2, and Riparian D1, Central Precinct Llandio, NSW, prepared for Lendlease (Maryland Development Company). Report ref: 14124 final SAR_KJL118_EW6.1_6.2, dated 13 October 2017.
- ZOIC (2018) Site Audit Report for Earthwork Zones, EW 7, 8, 9, 12, Riparian D2 and E, Central Precinct Llandilo, NSW. Report Ref: 14124 final SAR_KJL118_EW78912RipD2&E, dated 16 March 2018.
- JBS&G (2021) *Contamination Management Plan,* Central Precinct, Llandilo NSW, prepared for Maryland Development Company Pty Ltd. Report ref: 43352/61064 (Rev B), dated 5 March 2021.
- WSP (2023) *Geotechnical Investigation Report – Factual,* Jordan Springs East – Stage 3 to 6, prepared for Lendlease Communities Pty Ltd. Report ref: PSI129457-WSP-SYD-GEO-REP-0011, dated 28 April 2023.
- GLN (2023) *Statement of Environmental Effects,* Stage 3, Central Precinct, Jordan Springs NSW, prepared for Maryland Development Pty Ltd. Report ref: GLN11850 DA1, dated 15 May 2023.
- WSP (2024) Site-wide Earthwork Specification, Jordan Springs Central Precinct, for Lendlease Communities Pty Ltd. Report ref: PS129457-WSP-SYD-GEO-REP- 00027 (Rev0), dated 22 January 2024.
- Stantec Australia Pty Ltd (2024), Preliminary Desktop Site Investigation – Contamination, Prepared for School Infrastructure NSW, dated 15 March 2024.

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

- JBS&G (2015) *Sampling Analysis and Quality Plan*, Central Precinct, Llandilo NSW, prepared for Maryland Development Company Pty Ltd. Report ref: 43352-57348 (Rev 4), dated 12 November 2015.

- ZOIC (2016) Site Audit Statement Report, for EW1, EW2, Riparian zones A, B, C Central Precinct Llandilo, NSW, prepared for Lendlease. Report ref: 14124_SAR_Final_KJL118_EW12ABC, dated 30 September 2016.
- ZOIC (2017) Site Audit Report for Earthworks Zones, EW6.1, EW6.2, and Riparian D1, Central Precinct Llandio, NSW, prepared for Lendlease (Maryland Development Company). Report ref: 14124 final SAR_KJL118_EW6.1_6.2, dated 13 October 2017.
- ZOIC (2018) Site Audit Report for Earthwork Zones, EW 7, 8, 9, 12, Riparian D2 and E, Central Precinct Llandilo, NSW. Report Ref: 14124 final SAR_KJL118_EW78912RipD2&E, dated 16 March 2018.
- JBS&G (2021) *Contamination Management Plan,* Central Precinct, Llandilo NSW, prepared for Maryland Development Company Pty Ltd. Report ref: 43352/61064 (Rev B), dated 5 March 2021.
- WSP (2023) *Geotechnical Investigation Report – Factual,* Jordan Springs East – Stage 3 to 6, prepared for Lendlease Communities Pty Ltd. Report ref: PSI129457-WSP-SYD-GEO-REP-0011, dated 28 April 2023.
- GLN (2023) *Statement of Environmental Effects,* Stage 3, Central Precinct, Jordan Springs NSW, prepared for Maryland Development Pty Ltd. Report ref: GLN11850 DA1, dated 15 May 2023.
- WSP (2024) Site-wide Earthwork Specification, Jordan Springs Central Precinct, for Lendlease Communities Pty Ltd. Report ref: PS129457-WSP-SYD-GEO-REP- 00027 (Rev0), dated 22 January 2024.

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
JBS&G – Sampling Analysis and Quality Plan – Contamination Management Plan (CMP) – dated 12 November 2015.	
Objectives	JBS&G Australia Pty Ltd (JBS&G) was engaged by Maryland Development Company Pty Ltd to revise the Contaminant management Plan (CMP) for the Central Precinct Development and associated Regional Park site, located at Llandilo, NSW. The objective of this CMP is to provide an Unexpected Finds Protocol (UFP) with an appropriate framework for identifying and addressing any discovery of chemical contamination.
Background and scope of works	Given that the property straddles the boundary between two local government areas (Blacktown and Penrith), the NSW Government decided that a regional environmental plan should be prepared covering development of the Property.
ZOIC – Site Audit Statement Report, prepared for Lendlease – dated 30 September 2016.	
Objectives	The Site Audit Report and Statement evaluate the suitability of the 25.18-hectare site within the larger ADI (Australian Defence Industry) St Marys Property for residential development, adhering to the Contaminated Land Management Act (1997) guidelines and referencing specific Development Applications issued by Penrith City Council.
Background and Scope of works	The ADI St Marys Property, initially farmland and bushland, was acquired by the Commonwealth Government during WW2 for an explosives factory. In the early 1990s, contamination investigations were conducted for residential development, categorizing the current site in the former southern sector west with potential contaminating activities, though none were identified on the site. The site's suitability assessment occurred in two stages, pre-fill and post-fill importation, with a pre-fill assessment in 1999 confirming suitability. Additional sampling by JBS&G in 2016 confirmed no

Item	Description
	changes since the original audit, affirming the site's suitability for the proposed residential land use. The audit report is prepared for the auditor's review and endorsement of following validation documents. • JBS&G (26 August 2016) EW1, 2, Riparian Zones A, B, C and The Jordan Springs Connector Road, Draft Validation Report (50628-104961 (Rev A)). • JBS&G (19 September 2016) EW1, 2, Riparian Zones A, B, C and The Jordan Springs Connector Road, Final Validation Report (50628-104961 (Rev 0)) • JBS&G (29 September 2016) EW1, 2, Riparian Zones A, B, C and The Jordan Springs Connector Road, Final Validation Report (50628-104961 (Rev 1).
Results	Fill material imported onto the site between January 21 and February 24, 2016, adhered to the Imported Fill Protocol (JBS&G, 2015). The materials, categorized as 'Virgin Excavated Natural Material' (VENM), including crushed sandstone, ripped shale, and silty clays, were inspected and confirmed by JBS&G to meet low-density residential land use criteria. JBS&G conducted groundwater sampling from twelve monitoring wells from January 21 to 27, 2016. Analysis of BTEX, PAH, OCPs, PCBs, VOCs, and explosives concentrations reported levels below laboratory limits and adopted criteria. Some minor exceedances of nickel and zinc were noted in heavy metal concentrations.
Conclusions	Considering the classified fill import, pre-fill soil sampling, and groundwater assessment results, the site is deemed suitable for residential land use. The investigation and fill import sampling assessment are deemed to meet NSW DEC (2006) guidelines and other relevant criteria, with any deviations discussed in the Site Audit Report (SAR). A Section A Site Audit Statement (SAS) will be issued, certifying that, in the Auditor's opinion, the site is suitable for residential land use with access to soils. The SAR discusses any deviations from guidelines and affirms that these omissions do not impact the overall conclusions of the Site Audit.
ZOIC – Site Audit Report for Earthworks Zones, prepared for Lendlease – dated 13 October 2017.	
Objectives	The audit report is prepared for the auditor's review and endorsement of the validation document titled *"JBS&G (12 October 2017) EW6.1/EW6.2 Riparian D1 Validation Report, Central Precinct, Llandilo, NSW (ref: 50628-109363 (Rev 0))".*
Background and Scope of works	As per JBS&G (2017), the earthwork boundary has been divided into certain blocks, and the area belonging to the site (Lot 2 and Lot 3 of DP 1248480) has been marked as EW7 and EW8. Prior to World War 2 (WW2), the property consisted of farmland and natural bushland. During WW2, the property was acquired by the Commonwealth Government in 1941, and in 1942 established an explosives factory for ordnance and ammunition filling, tested and related procedures. The site, part of the former ADI St Marys Property, underwent historical assessments and recent investigations, considering environmental works and compliance with the Contaminated Land Management Act. This audit report has reviewed an additional audit report, conducted under statutory regulations, refers to specific development applications issued by Penrith City Council and covers a larger property initially used for explosives manufacturing during World War 2. Previous investigations in the early 1990s by ADI identified no historical contaminating activities in the within EW6.1, EW6.2 or Riparian D1 (residential area to the west of the site)
Results	Based on the review of JBS&G (2017), this site audit report concluded the followings; Surface levels were modified with various materials, including imported VENM, validated stockpile materials, and in-situ cut/fill materials, following reuse confirmation procedures outlined in the JBS&G SAQP and Stockpile Management Plan. Reviewed concentrations of various contaminants in infill sampling and groundwater were below laboratory reporting limits or adopted site criteria, indicating compliance with environmental standards.

Item	Description
Conclusions and recommendations	The report state that the investigation and sampling assessments met the requirements of NSW DEC (2006) and other relevant guidelines, with any deviations discussed in the Site Audit Report (SAR) without affecting the overall conclusions. The Auditor's opinion is that the site has been appropriately characterized for residential and commercial/industrial (roadway) purposes when considering the historical assessment, infill and groundwater sampling, and VENM assessment.
ZOIC – Site Audit Report for Earthwork Zones – dated 16 March 2018.	
Objectives	The Site Audit Report assess the site's suitability for residential land use, considering completed environmental works, historical assessments, and recent investigations.
Background and Scope of works	Kylie Lloyd of Zoic Environmental Pty Ltd has been commissioned by Maryland Development Pty Ltd to prepare this site audit report for the earth works conducted within the subject site. The site, part of the 1535-hectare ADI St Marys Property, had a pre-WW2 history as farmland and natural bushland. During WW2, it became a Commonwealth Government explosives factory, primarily for ordnance and ammunition filling operations. In the early 1990s, ADI conducted contamination investigations for future development, dividing the St Marys Property into sectors. The Eastern Earthworks Zone, falling within the former Southern Sector West and Central Sector West, had Area 9 as the only historical feature, identified as a former explosives detonation area within EW9.
Results	JBS&G performed an Environmental Site Assessment on previously inaccessible areas, specifically Paved Road 3 and W Series Buildings. Investigations confirmed these areas met residential criteria for proposed land use. Paved Road 3, W Series Buildings, and stockpile footprints (SP31 and SP32) underwent assessment for chemical and ordnance risks after removal. The Environmental Site Assessment results indicate suitability for residential use, with no significant chemical storage in the W Series Buildings. Chris Kidd's 1999 historical assessment of the Eastern Earthworks Zone confirmed its suitability for the proposed residential land use. JBS&G conducted infill (validation) and groundwater sampling to assess current site conditions, verifying no change since the historical audit, and confirming the site's continued suitability for residential use. Concentrations in sampling for various pollutants fell below laboratory reporting limits (LOR) or adopted site criteria. Groundwater sampling from twelve monitoring wells, conducted by JBS&G in January 2016, reported concentrations below LOR or adopted criteria for heavy metals, BTEX, PAH, OCP, PCB, explosives, and asbestos. Soil sampling within EW12 confirmed its suitability for residential use, following JBS&G SAQP. VENM materials were imported according to the Imported Fill Protocol, and reused stockpile materials were spread at shallower depths, with JBS&G providing justification for their suitability. JBS&G's 2017 groundwater analysis assessed potential PFAS contamination across the Central Precinct Development. PFOS, PFOA, and PFHXS concentrations in current site area samples were reported below LOR and adopted criteria, with only two down-gradient wells indicating PFHXS concentrations above the limits. A historical site review and a site-wide PFAS screening, it was determined that PFAS impacts were absent in the Central Precinct Development area.
Conclusions and Recommendations	The Auditor concurs with JBS&G, stating that the site has been appropriately characterized for residential purposes when considering the comprehensive results of the historical assessment, infill (validation), and evaluation of previously inaccessible audit areas. Additionally, the materials imported onto the site are confirmed to meet the Imported Fill Protocol (IFP) and are deemed suitable for the proposed residential land use. The site audit report concluded that, the site is suitable for residential land use with access to soils.

Item	Description
JBS&G – *Contamination Management Plan,* prepared for Maryland Development Company Pty Ltd – dated 5 March 2021.	
Background and Scope of works	The report was commissioned by Maryland Development Company Pty Ltd (MDC) to provide a revised Contamination Management Plan (CMP) for the Central Precinct Development (CPD) and associated Regional Park Site, located at Llandilo, NSW. It is noted that the sites' (i.e., Lot 2&3 DP 1248480) footprint is contained within the CPD boundary, which is situated within the greater former Australian Defence Industries (ADI) St Marys property, as ascertained from aerial figures and information provided in the JBS&G (2015) report. The CPD area was subject to extensive investigation and remediation works since the 1990s with the objective of: (a) assessing the nature and degree of remnant munition and chemical contamination associated with the historic use of the site by ADI; and (b) subsequent remediation of the land to a level suitable for the development of the land for a variety of land uses, including residential.
Conclusions and Recommendations	As deduced from the CMP document, the subject site is covered by SAS No: CHK001/01, certified by NSW EPA accredited auditor Mr. Christopher H. Kidd of HLA-Envirosciences Pty Ltd on 7 June 1999. SAS (CHK001/01) stipulates that the site is suitable for the development of a secondary school.
WSP – *Geotechnical Investigation Report – Factual*, prepared for Lendlease Communities Pty Ltd – dated 28 April 2023.	
Background and Scope of works	The report details the factual results obtained during geotechnical field and laboratory investigations carried out by WSP on behalf of Lendlease Communities Pty Ltd at part of Jordan Springs East (JSE) Stage 3, 4C, 5A, 5B1 and 6 development areas. It is understood that the combined JSE Stage 5A & 5B development areas represent the investigation footprint subject to this PSI. The site was subject to extensive anthropogenic filling during 2016-2017. Natural surface levels were raised from 17 – 20 m AHD to an engineered 22 – 25 m AHD as part of easement works for the expansion of the residential district. A total of nine (9) test pits and nine (9) boreholes were advanced within the site boundary. Test pits were advanced to depths ranging from 3.40 m below ground level (bgl) to 5.10 m bgl and were advanced using a 14-ton excavator. Boreholes were advanced to depths ranging from 2.40 m bgl to 6.45 m bgl and are understood to have been completed using solid flight auger drilling techniques. One (1) borehole (BH-P2-28) was finished with a groundwater monitoring well and was constructed with a 3 m length screen, extending from 3 m bgl – 6 m bgl within natural materials.
Results and Conclusions	The recorded subsurface conditions within the site boundaries consisted of an upper stratum comprising variable fill material assemblages of gravel, sand, silt and clay that extended from the surface to depths ranging from 2.3 m bgl to 4.9 m bgl, and an underlying stratum comprising natural alluvium soils. Traces of foreign materials were observed at most locations, including crushed concrete and brick. Laboratory salinity testing was undertaken for three (3) samples collected from fill materials at three (3) separate sampling locations within the site boundary, with results indicating that the fill materials are slightly saline.
GLN – Statement of Environmental Effects, prepared for Maryland Development Pty Ltd – dated 15 May 2023.	
Objectives	The report has been prepared for the purposes of: • Demonstrating that potential soil contamination impact at the site have been considered, and • Outlining steps to be undertaken to protect the environment or to mitigate against any potential harm, if necessary.
Background and Scope of works	GLN was commissioned by Maryland Development Pty Ltd to prepare a Statement of Environmental Effects (SEE) to accompany a development application (DA) seeking development consent from Penrith City Council (Council) for the staged development of the Stage 3 Jordan Springs estate that comprise Lots 1, 2, 3 and 6 in Deposited Plan 1248480; Wianamatta Parkway, Jordan Springs NSW.

Item	Description
Results	The lands are zoned Urban and Regional Open space, for which the proposal is permissible with consent in accordance with the provisions of State Environmental Planning Policy (Precinct – Western Parkland City) 2021.
Conclusions and Recommendations	The report concluded the site suitable for the type of development proposed.
WSP – Site-wide Earthwork Specification, prepared for Lendlease Communities Pty Ltd – dated 22 January 2024.	
Objectives	
Background and Scope of works	The report details the technical requirements and construction standards for all earthworks for Jordan Springs Central Precinct development carried out by WSP on behalf of Lendlease Communities Pty Ltd at part of Jordan Springs. This Specification has been prepared for Jordan Springs Central Precinct Stages 3, 5 & 6 (previously Village Park, Stage 3B2, 3C, 4D, 5A, 5B1, 5B2, 4C and Stage 6), which are earmarked for future housing development and associated infrastructure (roads, community spaces, etc.). The report further discusses the general earthwork requirements such as site preparation, earthworks methodology, bulk fill material compliance, placement of bulk earthworks fill interface construction sequence, and reporting and completion of works.
Results	Earthworks specification stated in the report includes the bulk earthworks requirements for removal and replacement of existing fill material within the site. Existing fill thickness generally varies from 3m to 7m deep.
Conclusions and Recommendations	The report does not indicate the fill thickness within the proposed Jordan Springs School site, with the purpose of the report more aimed towards quality control of importing soils.
Stantec Australia Pty Ltd, Preliminary Desktop Site Investigation – Contamination, Prepared for School Infrastructure NSW, dated 15 March 2024.	
Objectives	The objectives of the PSI were to assess whether contamination has the potential to exist on the site and whether further investigation is needed.
Background and Scope of works	Stantec Australia Pty Ltd (Stantec) was engaged by Department of Education (DoE) (the client) to complete a Preliminary Site Investigation (PSI) at the proposed site under consideration for the development of a new High School at Jordan Springs, located at Infantry Street, Jordan Springs NSW (herein referred to as 'the site'). The site locality and layout are shown in **Figure 1** in **Appendix A**. The PSI was prepared in accordance with the scope of works presented in an email proposal submitted to the client on the 17th of October 2023. Jordan Springs is currently planned for redevelopment into a precinct by Lendlease. The Masterplan for Jordan Springs and the draft preliminary site testing and block stack for the site is included in **Appendix B**. • A desktop study of information for the site and surrounds. • A site walkover by an experienced environmental scientist to identify potential sources of contamination. The inspection was primarily focused on the portions of the site that are proposed for upgrade and alteration, however, the broader site was also inspected but to a lesser extent; • Interviews with relevant persons, where possible; • Review of historical reports; • Development of a Preliminary Conceptual Site Model based on the information gathered during the desktop study and site inspection; and • Preparation of a PSI report detailing the findings, conclusions, and recommendations for the site (this report).
Conclusions and Recommendations	Upon completion of the PSI, the following conclusions were drawn:

Item	Description
	• Aerial images review did not indicate significant changes in the site since 1949 except imagery from 2016 showing earth works for the recent development project; • The historical report review, indicated part of the ADI St Marys Property, had a pre-WW2 history as farmland and natural bushland. During WW2, it became a Commonwealth Government explosives factory, primarily for ordnance and ammunition filling operations. • JBS&G has conducted contamination assessments including infill (validation) and groundwater sampling to assess current site conditions between 2016 to 2018. The most recent audit report by ZOIC Environmental Pty Ltd (March, 2018) states that the site has been appropriately characterized for residential purposes when considering the comprehensive results of the historical assessment, infill (validation), and evaluation of previously inaccessible audit areas. Additionally, the materials imported onto the site are confirmed to meet the Imported Fill Protocol (IFP) and are deemed suitable for the proposed residential land use. • Geosyntec (formerly ZOIC), advised School Infrastructure NSW (SINSW) that since their company provided the statement, it appeared groundworks had been undertaken and, in their opinion, the statement is no longer valid or a new and updated statement should be provided, once Lendlease provide all information required for such statement. • In consideration of the desktop review, document review, and site inspection, the following potential sources of contamination were identified as potentially creating exposure pathways for the proposed land use; o Potentially contaminated fill material imported to the site and dam wall. This risk and likelihood are considered low to medium; o Potentially contaminated dam water and dam sediments. The risk and likelihood are considered low to medium; and o Potentially contaminated from VOCs due to process of ordnance cleaning is low to medium Based on the findings of the report, the following recommendations are made: • Any additional reports prepared as part of the separate Lendlease DA should be provided and reviewed by Stantec as part of any additional works. • An intrusive investigation is recommended at the locations proposed for disturbance and new construction (as indicated in the preliminary site testing and stack plan). The basis for this recommendation is the observations of fill across the site that is of an unknown origin and quality. • The investigation should be targeted at locations where earthworks and ground disturbances are necessary for the proposed development.

5 Conceptual Site Model

A conceptual site model (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 activities.
- 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 potential contamination sources

Based on review of the historical reports, site history and surrounding land uses, Stantec have identified the following potential sources of contamination that may be encountered onsite which are presented in **Table *5-1*** below.

Table 5-1 Contamination Sources Summary

Contamination Source	Description	Contaminants of Concern	On/off Site
Potentially contaminated fill materials imported to the site	Evidence of filling was noted during the ground preparation works for the project. Also, it is possible to import materials for filing of the dam wall. It is unknown if the fill was site-won during historical cut or imported. Chemical properties within the fill material have been investigated as per historical reports of the site. No significant chemical contamination was identified, indicating that the fill material is likely to be a low risk.	Metals, TRH, BTEX, PAH, OCP/OPP, asbestos, PFAS, VOC, TCE	On site
Dam sediments and dam water	The water quality of the dam and the contamination status of the dam sediments remained unknown, with potential influences form imported fill.	Metals, TRH, BTEX, PAH, OCP/OPP, PFAS, VOC, TCE	On site
Historical ADI's explosives factory for ordnance and ammunition filling, tested and related procedures	Contamination can be transferred to soil and groundwater due to past practices and disposal methods in explosive manufacturing. Contaminants such as Trichloroethylene (TCE) may have been used for degreasing and cleaning.	VOC, TCE, PCE, TCA	On site
Potentially contaminated groundwater flow	Potentially contaminated groundwater both via seepage flows between the interface of the fill and alluvium deposits as well as within the	TRH, BTEX, PFAS, TCE, PCE, TCA	Off site

Contamination Source	Description	Contaminants of Concern	On/off Site
from off-site sources	water table could be migrating onto the site from an upgradient industrial source.		

Notes: **Metals** (standard 8)**, total recoverable hydrocarbons (TRH), benzene, toluene, ethylene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), organochlorine / organophosphorus pesticides (OCP/OPP), asbestos, Per- and polyfluoroalkyl substances (PFAS), Volatile Organic Compounds (VOCs), Trichloroethylene (TCE)**, Perchloroethylene (PCE), Trichloroethane (TCA)

5.1.2 Identified Receptors

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

- Future students of the school, post-construction;
- Teachers and school staff including groundskeepers and contractors;
- Workers during construction of the proposed activities (including intrusive or other maintenance workers);
- Adjacent site users;
- Ecological receptors on-site such as vegetation, soil invertebrates, terrestrial and aquatic ecology
- Ecological receptors off-site receiving groundwater and/or surface water originating from the site.

The preliminary CSM applicable to the site is summarised in **Table 5-2** and applies to the potential future land use settings.

Table 5-2 Preliminary Conceptual Site Model

Contamination Source	Potentially Impacted Media	Contaminants of Potential Concern	Potential Exposure Pathways	Receptors	Likelihood of complete exposure pathway
Potentially contaminated fill materials imported to the site	• Soils	• Metals, TRH, BTEX, PAH, OCP/OPP, asbestos, PFAS, VOC, TCE	• 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) and students / staff. **Ecological:** • Receiving water bodies. • Flora and fauna dependant on soil and waters in potentially impacted areas.	Low to medium likelihood: filling was evident at various locations within the site, such as roads and dam wall, quality of fill is currently unknown.
Dam sediments and dam water	• Water and sediments	• Metals, TRH, BTEX, PAH, OCP/OPP, PFAS, VOC, TCE	• Dermal contact • Ingestion • Inhalation • Direct uptake		Low likelihood: Accumulated contaminants could potentially be present in the dam water and sediment due to leaching of contaminants from soil and receiving impacted surface water / groundwater from on-site and off-site sources, however, the likelihood is considered low.
Historical ADI's explosives factory for ordnance and ammunition filling, tested and related procedures	• Soil • Groundwater	• VOC, TCE, PCE, TCA	• Vapour intrusion		Low likelihood: Possible TCE contaminants originating from degreasing and cleaning processes, however, the likelihood is considered low.
Potentially contaminated groundwater flow from off-site sources	• Water and sediments	• TRH, BTEX, PFAS, TCE, PCE, TCA	• Dermal contact • Ingestion • Direct uptake		Low likelihood: waters from on-site and off-site, if contaminated, have potential to impact down-gradient receptors, however, the likelihood is considered low.

6 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**. The site is proposed for redevelopment as per the description provided in **Section 2.1** and an investigation is required to assess if contamination is present at concentrations that would constrain development or render the site unsuitable, considerate of the identified human and ecological receptors. There was insufficient information available to evaluate suitability without intrusive assessment of the site.
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 redevelopment due to 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. If this can be shown, 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 development. 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 decision and specify which inputs require new**	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; • Information (including site history) or results from previous investigations completed at the site;

DQO Step	Discussion
environmental measurements).	• 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 **Figure 2, Appendix A**. • Vertical – the intrusive environmental investigation was limited to a maximum extent of 10m BGL (BH203). • 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, surface water 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 6-2.** 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 7**, 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 soil and sediment, a representative group of samples (i.e. from the same strata and area within the site) show that: o The calculated 95% Upper Confidence Level of the arithmetic mean (95%UCL) contaminant concentration is less than criteria; and o The standard deviation of the results is less than 50% of the relevant adopted criteria; and, o No single analytical result for a contaminant of concern exceeds 250% of the relevant adopted criteria. Surface water and groundwater results will be considered less than adopted site criteria nominated in **Section 7**, if:

DQO Step	Discussion
	• The laboratory 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 **Section 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 scope of works, as specified in the SAQP and this document, 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** 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 *6-1***.

Table 6-2 Data Quality Indicators

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
Precision: A quantitative measure of the	• Standard operating procedures (SOP) are	• Laboratory analyses of laboratory and inter-laboratory duplicates, field

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
variability (or reproducibility) of data.	appropriate and complied with. • Field duplicates and Blind field duplicates are collected and analysed at a rate of 5% (1 per 20 samples) and 10% for PFAS. • Use of calibrated equipment.	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 = I CO – CR I x 100 [(CO + CR) / 2] 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 duplicates and Blind field duplicates are collected and analysed at a rate of 5% (1 per 20 samples) and 10% for PFAS. • Acceptable Relative Percentage Difference (RPD) • Analysis of rinsate sample collected at rate of 1 per sample dispatch.	• 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% • 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.

QAQC Measure	Field Quality Indicator	Laboratory Quality Indicator
		• 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 Stantec's approved proposal. • 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 type, preservation and handling are consistent at sampling events. • Use of calibrated equipment.	• Sample analytical methods used (including clean-up). • Sample PQLs (justify/quantify if different). • Same laboratories are used, and justification is given where differences occur. • Same analytical methods, PQLs, and units of measurement are used.

7 Assessment Criteria

The assessment of soils, sediment, surface water and groundwater 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.

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**.

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: Developed open space such as ovals, secondary schools and footpaths.
- Ecological: Urban residential / public open space.

7.1.1 Human Health Criteria

The human health soil assessment criteria that have been adopted for comparison against laboratory data are summarised below in **Table *7-1*** along with the justification for their selection.

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-C	Health Investigation Level (HIL) C thresholds have been adopted to assess the risk to site users from soil contamination. These criteria are applicable to secondary schools, playgrounds and playing fields.
	HSL-C	Health Screening Level (HSL) C thresholds have been adopted to assess vapour intrusion and inhalation in a sand / coarse grained geological setting. This geology type has been adopted as the most conservative scenario for vapour intrusion under the proposed land use.
	Asbestos	The following criteria have been applied to the assessment of asbestos, considerate of the future site use as a school: • 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, which is the most conservative criteria and encompasses a school land use setting.
	Aesthetic Criteria	In order to assess aesthetic suitability of site soils, the following will be considered:

Guidelines	Specific Criteria	Justification
		• 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-C	Health Screening Level (HSL) C thresholds have been adopted to assess for risk from direct contact with TRH impacted soils and are protective of future site users in the event of contact with gross hydrocarbon impacted soils and potential vapour generation.
NEMP 2.0 (2020)	Soil: HIL-C Table 2	Due to the potential presence of PFAS, the following guideline values for human health guideline values have been derived from the NEMP 2.0 (2020), which apply to a secondary school land use. • Sum of PFOS and PFHxS (HIL-C: 1.0 mg/kg). • PFOA (HIL-C: 10.0 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) were derived by determining the physiochemical properties of shallow (maximum of 2 m) site natural soils. Samples were collected across the site from each unique material type/soil domain and undergo laboratory analysis for pH, CEC and clay content (%), and were 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 secondary school use will be adopted for natural soils.
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 = 1.0 mg/kg • PFOA = 10.0 mg/kg Ecological Indirect exposure values: • PFOS = 0.01 mg/kg

Sampling and analysis of site soils was conducted to derive site-specific EIL. The EIL parameters and specified EIL are summarised below in **Table *7-3*** and are based on 'aged' contamination.

Table 7-3 EIL Derivation Data and EIL Criteria

Sample ID	Matrix description	Parameters						Criteria – Aged
		pH	**CEC**	**Clay (%)**	**Copper**	**Chromium**	**Nickel**	**Zinc**
BH01_0.5	Clayey SILT - Fill	6.9	6.8	28	150	570	70	370
BH02_2	Silty CLAY - Fill	4.7	9.2	36	85	620	140	220
BH10_0.1	Gravelly to Clayey to Silty SILT – Fill	7.9	8.8	34	190	600	130	440
TP09_1.4-1.5	Clayey GRAVEL – Fill	7.8	12.3	19	220	500	200	550
TP12_1.0-1.1	Gravelly to Silty SAND - Fill	7.3	5.1	18	110	490	40	310

7.1.3 Acid Sulfate Soils Criteria

The soil assessment criteria adopted to assess the presence of potential or actual acid sulfate soils has been derived from the ASSMAC (1998) *Acid Sulfate Soil Manual, Acid Sulfate Soils Management Advisory Committee* and the National Acid Sulphate Soils Guideline (NASG): *National Acid Sulphate Soils Identification and Laboratory Methods Manual*.

As the current volume of disturbed spoil is currently unknown as part of the proposed activities, test results are to be compared to criteria for >1000 of material disturbance as shown in **Table 7-4**.

Table 7-4 Acid Sulfate Soils Assessment Criteria

Type of Material		Parameters			
		1 – 1000 t Material Disturbed		**1000 t Material Disturbed**	
Texture Range	Approximate Clay Content (%)	**% S-equiv.**	**Mole H+/t**	**% S-equiv.**	**Mole H+/t**
Fine: light medium to heavy clays	>40	**≥ 0.10**	**≥ 62**	**≥ 0.03**	**≥ 18**
Medium: clayey sand to light clay	5-40	**≥ 0.06**	**≥ 36**		
Coarse and Peats: sand to loamy sands	<5	**≥ 0.03**	**≥ 18**		

The following definitions, as provided in *the classification of acid sulfate soil materials: further modifications*. Southern Cross Geoscience Technical Report No. 310 (Sullivan, 2010) will be used to identify whether soils can be considered "sulfidic".

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 **Table *7-5*** below, along with the rationale behind the adopted criteria. Where no applicable criteria exist 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 7.1.3** above.

Table 7-5 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 Groundwater Assessment Criteria

The environmental properties of groundwater have 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 Tier 1 assessment criteria as made or approved under s105 of the CLM Act 1997 by NSW EPA. 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 applicable environmental values and groundwater assessment criteria are outlined in **Table 7-7** below, whereas the rationale for the criteria is provided in **Section 7.3.1**.

7.3.1 Rationale for Groundwater Assessment Criteria

In accordance with the Guidelines for the Assessment and Management of Groundwater Contamination (NSW DEC, 2007), groundwater acceptance criteria are based on environmental values considered relevant for groundwater use at the site and surrounding uses of groundwater that may be affected by the site. Environmental values include:

- Aquatic ecosystems: surface water and groundwater ecosystems;
- Human uses: these include but are not limited to potable water supply, agricultural water supply (irrigation and stock watering), industrial water use, aquaculture and human consumption of

aquatic foods, recreational use (primary and secondary contact with surface waters) and visual amenity;

- Human health in non-use scenarios: this includes consideration of health risks that may arise without direct contact between humans and the groundwater, for example, exposure to volatile contaminants above groundwater contaminant plumes; and
- Buildings and structures: this includes protection from groundwater contaminants that can degrade building materials through contact; for example, the weakening of building footings resulting from chemically aggressive groundwater.

Cultural and spiritual values that are associated with the environment, including groundwater, should also be protected. Cultural and spiritual values may include spiritual relationships, sacred sites, customary uses, the plants and animals associated with the water, drinking water supplies and recreational activities. In managing groundwater contamination, it is generally considered that cultural and spiritual values will be protected where groundwater quality protects all other relevant environmental values on a site.

As identified in **Table 3-3**, a search of registered groundwater bores within a 1 km radius of the site was completed, with one well providing standing water level (SWL) information. GW111463 which is located 892 m southeast of the site reported a standing water level of 7.02 – 9.18 m BGL whilst GW111462, located 990 m southeast of the site reported a standing water level of 4.46 – 9.77 m BGL. All bore types were reported as monitoring with only information on bore depth provided. Based on this information, an assessment of the applicability of groundwater environmental values, both onsite and offsite, is provided in **Table 7-6** below

Table 7-6 Groundwater Assessment summary

Environmental Value	Applicable	Rationale / Comment
Protection of aquatic ecosystems	Yes	The potential receiving water body for the site is an unnamed dam located at the eastern extent of the site. Further east is a tributary known as South Creek which discharges into the Hawkesbury River. Hawksbury River is considered a freshwater system that could be impacted by shallow groundwater flow. Protection of freshwater aquatic ecosystems is considered an applicable environmental value.
Drinking water	No	The site is in an area serviced by reticulated drinking water supply. A bore search did not identify bores downgradient of the site registered for drinking water extraction. Based on the above, this environmental value is not considered to be directly relevant.
Irrigation	No	No onsite use of groundwater for irrigation purposes has been identified. A downgradient bore, located 981m southeast has been identified as a monitoring bore, with no irrigation bores identified. As such, this environmental value is not considered relevant for the site.
Stock Watering	No	On-site use of groundwater 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	No onsite or offsite use of groundwater for industrial purposes has been identified. 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. As such, this environmental value is not considered relevant.
Recreational Use	Yes	This environmental value may be relevant within the closest surface water bodies where groundwater migrates to the surface water body and secondary or primary exposure to the public occurs. The waterbodies located within the eastern portion of the site, and downgradient of the site to the east (particularly the South Creek) have potential to impact the future workers during construction through exposure to contaminants that have migrated in groundwater. Based on the distance to waterbodies, this environmental value is considered relevant. This environmental value may also be relevant to intrusive maintenance workers if groundwater is encountered at depths between 2 – 3 m bgl.
Non-use scenarios (i.e. vapour inhalation and intrusion)	Yes	Groundwater health screening levels for vapour intrusion (HSLs) are published in the NEPC 2013, Schedule B1 for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation pathways. Workers and future users/occupiers of the land may be exposed to vapours emanating from contaminated groundwater, if present. This environmental value should be assessed.
Buildings and Structures	Yes	Groundwater may come into contact with pilings and footings of proposed buildings and infrastructure. Corrosive waters, if present, are a cause of concern for buildings and infrastructure and so this environmental value should be assessed.
Visual amenity and aesthetics	No	Groundwater with aesthetic or visual amenity issues are unlikely based on the proposed land-use as a secondary high school campus.

Based on the above assessment, the environmental values (REVs) for the site groundwater to be further assessed are:

- Protection of aquatic ecosystems;
- Recreational purposes;
- Non-use scenarios (vapour); and
- Buildings and structures.

Results should therefore be assessed against the assessment criteria provided in **Table 7-7**.

Table 7-7 Groundwater Assessment Criteria

Environmental Value	Guideline or Standard	Criteria
Aquatic ecosystems	ANZG 2018	Freshwater, 95% species protection default guideline values (DGVs). 99% species protection DGVs apply to bioaccumulative toxicants.
	For PFAS: HEPA NEMP 2020 (Ver. 2.0), Table 5	Freshwater, 95% species protection. The 95% species protection defaults to the 99% value as PFAS are bioaccumulative.
Non-use scenarios (i.e. vapour inhalation and intrusion)	NEPC 2013, Schedule B1, Table 1A(4)	HSL-A&B, NEPM 2013 GW HSL Residential setting, vapour intrusion.
Water impact on Buildings and Structures	Australian Standard 2159-2009 Piling-Design and Installation (AS2159)	Physiochemical parameters, where collected, will be compared against criteria
Recreational purposes	NHMRC Guidelines for Managing Risks in Recreational Water (2008)	Managing Risks in Recreational Water 2008 (Health)

7.4 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 7-8** below, whereas the rationale for the criteria is provided in **Section 7.3.**

7.4.1 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 *7-8***.

Table 7-8 Assessment of Surface Water Environmental Values

Environmental Value	Applicable	Rationale/ Comment
Protection of aquatic ecosystems	Yes	There is one dam located within the eastern portion of the site. An ephemeral drainage line (South Creek) is located approximately 300m east of the site. The dam is inferred to be used for containment of water prior to the release to South Creek, a downstream receiving system. Both are freshwater environments. Protection of freshwater aquatic ecosystems is considered an applicable environmental value.
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 used 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 whole body primary or incidental secondary contact to surface water occurs either for school children or workers during construction. Definitions of water contact are as follows: • Whole body 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

Environmental Value	Applicable	Rationale/ Comment
		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 inhalation and intrusion)	Yes	Groundwater health screening levels for vapour intrusion (HSLs) are published in the NEPC 2013, Schedule B1 for selected petroleum compounds 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	No	As per **Appendix B**, no structures or buildings are proposed to come in contact with the surface waters located on site. Corrosive waters are unlikely to cause concern for infrastructure and therefore, this environmental value is not considered applicable.
Visual amenity and aesthetics	Yes	Surface waters with aesthetic or visual amenity issues may occur within site waterbodies and as such should be assessed.

Based on the above assessment, the surface water environmental values (SWEV) for the site surface water to be further assessed are:

- Protection of aquatic ecosystems;
- Irrigation;
- Non-use scenarios (vapour); and
- Visual amenity and aesthetic.

Stantec has adopted 95% species protection value (slightly to moderately disturbed) based on the observed condition and surrounds of the site. This includes biological diversity may have been adversely affected to a relatively small but measurable degree by human activity (ANZG, 2018).

Results should therefore be assessed against the assessment criteria provided in **Table *7-9***.

Table 7-9 Surface Water Assessment Criteria

Assessed Value	Guideline or Standard	Criteria
Protection of aquatic Ecosystem	ANZG 2018 & NSW Water Quality and River Flow Objectives [1]	• 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.

Assessed Value	Guideline or Standard	Criteria
	For PFAS: HEPA NEMP 2020 (Ver. 2.0), Table 5 [1]	Freshwater, 95% level of protection. The 95% level of protection defaults to the 99% level of protection as most PFAS compounds 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.
Water in non-use scenarios (i.e. vapour inhalation and intrusion)	NEPM 2013	Groundwater – HSL A&B for vapour intrusion in recreational settings.

8 Methodology

8.1 Site Investigation Program

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

A summary of the activities undertaken during delivery of the DSI is provided below in **Table *8-1***.

Table 8-1 Investigation Activity Summary

Activity	Details
Dates of Field Activities	The specific site activities undertaken are summarised below in chronological order: ▪ **2nd October 2024:** o Service locating at the locations to be subjected to ground disturbance. o Opportunistic soil sampling from two boreholes that were being advanced by Stantec's geotechnical team. ▪ **8th October 2024:** o Collection of nine (9) sediment samples via the use of hand-tools. o Surface water sampling from three (3) water bodies within the site (SW01, SW02 and SW03). ▪ **9th – 11th October 2024:** o Advancement of twelve (12) test pits and collection of soil samples throughout the soil profile. ▪ **10th – 11th October 2024:** o Advancement of thirteen (13) boreholes and collection of soil samples throughout the soil profile. o Conversion of five (5) boreholes into groundwater monitoring wells. ▪ **21st and 22nd October 2024:** o Development of groundwater wells following installation and in advance of sampling. ▪ **25th October 2024:** o A groundwater monitoring event was completed utilising five wells located throughout the site MW01 and MW02, MW03, MW04 and MW05. ▪ **8th November 2024:** Survey of two (2) groundwater well locations (Environmental Wells – MW01 & MW02).
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. Service clearance was completed by a third-party specialist subcontractor.
Soil Boring (hand excavations)	Nine (9) soil bores were advanced via hand auger to a maximum depth of 0.5 m BGL. The distribution of soil bores is shown on **Figure 2**, **Appendix A**.

Activity	Details
Test Pitting	Twelve (12) test pits were advanced utilising a 14-tonne track mounted excavator to maximum depths of 3.6 m BGL. The distribution of test pits within the site is shown on **Figure 2**, **Appendix A**.
Soil and Sediment Logging	The geological profile and observations of each test pit, soil bore and sediment sampling point were logged onsite in general accordance with Australian Standard AS 1726:2017 – Geotechnical Site Investigations, however it is noted that the logs are not prepared for geotechnical interpretation.
Soil Sampling	• Soil samples were collected from 0.1 m BGL (near surface), 0.3 m BGL, 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; • Sampling was undertaken whilst wearing disposable nitrile gloves, transferring soils to the designated sampling containers. The 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 as there were no markers of ACM, as recommended by the applicable guidelines. AF and FA were assessed through collection of grab samples.
Acid Sulfate Sampling Methodology	The procedure for acid sulfate identification and sampling in soils included: • Visual assessment of the excavated material from each borehole was completed onsite in accordance with Australian Standard AS 1726:2017 – Geotechnical Site Investigations. During drilling, any observed ASS indicators were noted, including: Sulfurous odours, Jarositic horizons and other sulfur mineralisation, Acid corroded shells, and, Peaty or grey to black soils. • Samples were collected by Stantec field staff from each sample locations at surface and every 0.5 m thereafter until target depth was achieved. All collected samples were analysed by a NATA-accredited laboratory for pH Field / pH Oxidised to screen for actual or potential ASS. Samples that indicated actual or potential ASS required a further Chromium Reducible Sulfur (CRS) suite confirmatory analysis to be undertaken to assess for the potential and retained sulfur acidity.
Soil Salinity Sampling methodology	The procedure for soil salinity sampling in soils includes:

Activity	Details
	• Samples were collected by Stantec field staff from each sample locations at surface and every 0.5 m thereafter until target depth was achieved. Select samples were then analysed by a NATA-accredited laboratory pH, EC and Chloride (soluble). • Completion of a soil salinity risk assessment following review of laboratory results.
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 sediments were collected with a decontaminated hand auger. 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.
Groundwater Well Installation	Installation of two (2) groundwater wells during the DSI fieldwork was undertaken by the licenced driller in accordance with the *Minimum Construction Requirements for Water Bores in Australia. Fourth Edition*. The screened intervals were determined on site in consideration of the observed hydrogeological conditions during drilling.
Groundwater Well Development	The following well development procedure was undertaken: • To allow concrete and bentonite to cure, well development was undertaken a minimum of 12 hours following well head grouting, and a minimum of one day following installation; • A minimum of three (3) bore volumes of water was purged from the well, or purged dry if a low recharge rate was encountered, utilising PFAS-free foot valve pumps and tubing. The purged water was visually assessed for residual fines, and development continued, where practical, until the water became clear; • Wastewater was taken off site and disposed of to a licensed facility.
Groundwater Sampling	A total of seven (7) groundwater samples were collected – five (5) primary samples, two (2) quality control samples, as well as one (1) rinsate sample. Groundwater monitoring was undertaken as per the methodology below: • The static water level (SWLs) was measured in metres from the top of casing; • Physicochemical parameters including pH, electrical conductivity (EC), redox potential (ORP), dissolved oxygen (DO), and temperature were measured using a calibrated water quality meter. • For groundwater wells with sufficient recharge, groundwater samples were collected once field parameters had stabilised directly from low-flow sampling techniques, which included use of a bladder pump and PFAS free tubing. • Collection and submission of samples to a National Association of Testing Authorities, Australia (NATA) accredited laboratory for analytical testing.
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. The location of surface water and sediment sampling was coupled to assess for potential correlations. 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.

Activity	Details
	Surface water was collected at the surface of water bodies 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 (auger, shovel, trowel, mattock), sediment sampler and extendable sampling pole were decontaminated by washing with Liquinox (PFAS and phosphate-free cleaning detergent), followed by a rinse with potable water and de-ionised water (rinsate water).
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 and distribution

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. Specifically, reports and site audit statements that stated the imported material adhered to the 'Imported Fill Protocol' (ZOIC (2017) Site Audit Report for Earthworks Zones, EW6.1, EW6.2, and Riparian D1, Central Precinct Llandio, NSW, prepared for Lendlease (Maryland Development Company). Report ref: 14124 final SAR_KJL118_EW6.1_6.2, dated 13 October 2017.) and categorised as 'Virgin Excavated Natural Material' (VENM) including crushed sandstone, ripped shale and silty clays.

In consideration of the above, Stantec considered it justified to advance 50% of the recommended minimum number of sampling points specified in the NSW EPA Sampling Design Part 1 – Application guidelines (NSW EPA, 2020). As such, a total of twenty-six (26) sampling points were advanced during the investigation conducted by Stantec. 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 and mitigating against possible unexpected finds during construction.

9 Results

9.1 Soil

9.1.1 Field Observations

Twenty-six (26) 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 G**.

Table 9-1 Typical Sub-Surface Conditions Summary

Sub-Surface Horizon	Depth Range (m BGL)	Description
Fill	0.0 – 4.8	Fill material encountered on site was typically described as the following profile: Clayey SILT: low plasticity clay, non-plastic to low, dark brown, soft, with medium to coarse sized gravel, trace medium grained sand, dry, no staining, no observed asbestos containing material.
Natural, Alluvium	3.8 – 6.0	Sandy to Silty CLAY: soft, medium to high plasticity, brown, trace fine sized gravel, inorganic, moist to slightly moist.
Natural, Residual	1.5 – 6.0	Silty CLAY, soft, brown, fine grained, medium plasticity, trace fine sized gravel, inorganic, slightly moist.
Rock (weathered)	N/A	Not encountered.

The following key soil observations were noted during the DSI:

- The fill material profile encountered across the site ranged from 0.1 – 4.5 m BGL. Fill thickness was observed to occur deepest within the southwestern portion of the site at sample location BH03, BH04 and BH12. The remainder of the site contains a fill layer that varies between 0.1 and 3.5 mBGL.
- Trace anthropogenic materials (plastic, concrete, bricks, and metal wire) were encountered within shallow surficial soils, generally ranging between 0.0 – 1.8 m BGL at sample locations TP01, TP02, TP03, TP08, TP09, and BH07. Sheen, odour, discolouration and staining were not observed on ground surfaces or in excavated materials with the exception of a mild organic odour noted at TP02. Asbestos was not observed on ground surfaces or within soils, and large masses of demolition rubble in fill were not observed.
- Groundwater seepage was observed during drilling at sample location BH01, BH04, BH05, BH07, BH09, BH11, and BH12.
- The fill material samples collected, were screened via a PID. PID recordings were generally low across the site, which ranged from 8.4 ppm at BH07 (1.5m BGL) to 0.0 ppm at several test pit locations (i.e., TP05, TP03, TP02). Sampling locations – TP10, TP09, TP08, BH01, BH02, BH06, BH07 and BH09 recorded relatively the higher readings, ranging from 4.5 ppm to 8.4 ppm, between 0.5m BGL to 1.5m BGL.

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**. Laboratory reports in their entirety are provided in **Appendix F**.

9.1.2.1 Human Health Criteria

The soil samples analysed were recorded either below the laboratory Limit of Reporting (LOR) or below the applicable human health screening criteria for the proposed future land use.

9.1.2.2 Ecological Criteria

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

9.1.2.3 Acid Sulfate Soils

A total number of 45 soil samples were selected for pH Field / pH Oxidised laboratory analysis to assess for actual or potential ASS. The results indicated that a total of five (5) samples possessed potential presence of actual or potential ASS.

To confirm the acid content and sulfidic acid generating potential of the soils onsite, five (5) selected soil samples underwent Chromium Reducible Sulfur (CRS) suite analysis. A summary of results is presented in **Table 9-2** below and presented in **Appendix E**.

Table 9-2 Acid Sulfate Soil Exceedances Summary

Analyte	Adopted Criteria	Sample Location	Laboratory Result
pH (Fox)	ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value (<3 pH unit)	BH03_4.5	3.5
		BH03_5	3.8
		BH12_5.5	3.1
		BH202_6	3.4
Chromium Reducible Sulfur	NASSG (2018) Sulfidic Soils, potential AASS (0.01 % S)	BH01_5	0.029 % S
		BH03_4.5	0.017 % S
		BH03_5.5	0.021 % S
		BH12_5.5	0.019 % S
		BH202_6	0.025 % S
CRS Suite – Net Acidity (Acidity Units)	ASSMAC (1998) / NASSG (2018) Action Criteria – Fine Soils (>1000 tonnes) (18 mol H+/t)	BH01_5	23.09 mol H+/t
		BH03_4.5	66.60 mol H+/t
		BH03_5.5	49.10 mol H+/t
		BH202_6	77.59 mol H+/t

Analyte	Adopted Criteria	Sample Location	Laboratory Result
CRS Suite – Net Acidity (Sulfur Units)	ASSMAC (1998) / NASSG (2018) Action Criteria – Fine Soils (>1000 tonnes) (0.03 % S)	BH01_5	0.04 % S
		BH03_4.5	0.11 % S
		BH03_5.5	0.08 % S
		BH202_6	0.12 % S

9.1.2.4 Salinity Assessment

A total number of thirty-six (36) samples were assessed for Particle Size Analysis (PSA) to determine the texture of soils onsite ranging from depths between surface to 6.0 mBGL. A total number of twenty-four (24) samples were assessed for EC, pH, Cl ranging from depths between surface to 2.0 mBGL to assess salinity in soils sampled onsite. Laboratory reports in their entirety are provided in **Appendix F**.

Findings of the assessment are provided in **section 10** below.

9.2 Sediment

9.2.1 Field Observations

Eight (8) sediment samples were collected from an unnamed water body (dam) located at the eastern portion of the site. The approximate location of the sampling points is presented in **Figure 2**, **Appendix A**.

The following key observations were noted during the investigation:

- The sediment was characterised as a clayey to silty SAND, with a low plasticity clay, grey colouration, very loose, medium grained, with medium sized gravel, wet, light-yellow inclusion at 0.2 m BGL, slight organic / sulfur odour, no staining, no observed asbestos containing materials.
- During sampling, reeds and grasses were observed surrounding the waterbody.
- A firm ground profile was encountered at 0.15m BGL as sample location SED08, observed to be a potential Geo-fabric layer.
- A slight organic / sulfur odour was present upon all sample location, with the exception of SED01.
- The water body appeared to receive surface water runoff from upgradient portions of the site, but also had a larger off-site catchment upgradient to the south, which appears to be fed by an ephemeral stream and engineered stormwater infrastructure.

9.2.2 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.

9.3 Groundwater

9.3.1 Field Observations

Each well was gauged using an oil/water interface probe to assess for the presence of light non-aqueous phase liquid (LNAPL) and to measure the standing water level. Each well installed during the DSI was surveyed by Stantec to measure the top of casing and ground level to establish the relative level of the groundwater table and to assist with determining groundwater flow direction. A summary of the gauging and survey data is provided below in **Table 9-3**.

Table 9-3 Groundwater Field Gauging Observations

Well ID	Screened Interval (mBGL)	Date	SWL (mTOC)	Surface RL (m)	Well stick up (m)	TOC RL	Elevation SWL (mAHD)	Bore Depth (mTOC)	LNAPL Thickness (mm)
MW01	4.2 – 7.2	25/10/2024	5.78	17.97	0.94	18.67	12.89	8.17	Not detected
MW02	5.5 – 8.5	25/10/2024	4.90	19.10	0.64	19.69	14.79	8.96	Not detected
MW03*	3.5 – 9.5	25/10/2024	5.50	21.24	0.80	22.04	16.54	10.49	Not detected
MW04*	3.5 – 9.5	25/10/2024	5.28	23.01	0.73	19.24	13.96	10.80	Not detected
MW05*	3.5 – 12.5	25/10/2024	5.07	22.24	0.80	23.04	17.97	15.60	Not detected

[1] Gatic (below ground level)
SWL: static water level
TOC: top of casing
RL: relative level
AHD: Australian height datum
* installed predominantly for geotechnical purposes

9.3.2 Water quality parameters

Groundwater wells were sampled utilising low-flow sampling techniques, in which wells were purged until groundwater field parameters were stabilised before collecting a sample. Groundwater field parameters and observations noted during the groundwater sampling event are shown below in **Table 9-4**, with the locations of groundwater wells indicated on **Figure 2**, **Appendix A**.

Table 9-4 Groundwater Field Parameters

Well ID	Date	pH	Electrical Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Temp °C	Measured ORP (mV)	Observations
MW01	25/10/2024	5.4	357.6	0.10	19.2	107.2	Slight brown/grey, low turbidity.
MW02	25/10/2024	4.5	13,460	-0.03	20.0	164.6	Clear, low turbidity.
MW03	25/10/2024	5.7	11,824	-0.04	20.9	156.7	Light brown, medium turbidity.
MW04	25/10/2024	5.7	4,524	19.0	19.3	120.4	Brown, medium turbidity.
MW05	25/10/2024	11.7	3,760	-0.09	19.2	-371.1	Slight brown, low turbidity, low-moderate sulfur/organic odour noted.

A brief interpretation of groundwater parameters is provided below:

- Groundwater on site was recorded as slightly to moderately acidic.
- Electrical conductivity varied, indicating both fresh water and saline water conditions:
  - MW01 recorded the lowest electric conductivity, indicating fresh water which may be attributed to local rainfall and recharge within the area;
  - MW02 and MW03 recorded the highest electrical conductivity readings, indicating saline water conditions.
- The sample locations recorded oxidising water conditions.
- No odours were noted in MW01, MW02, MW03 and MW04.
- Sulfur/organic odour noted in MW05. MW05 is a geotechnical well which was sampled opportunistically and was drilled significantly deeper than MW01, MW02, MW03, and MW04 (see **Table 9-3**). The sulfur/organic odour noted during sampling may be attributed to:
  - The monitoring well being drilled into acid bedrock; and/or
  - The monitoring well being drilled into paleo deposits such as peat, where an organic odour may be present due to the breakdown of organic matter over time.
- Dissolved oxygen was low in the majority of samples with MW01, MW02, MW03 indicating an anoxic environment. Dissolved oxygen recorded at MW04 indicated oxic conditions.

9.3.3 Analytical results

Table 9-5 below summarises exceedances of adopted groundwater criteria, with the remainder of samples reported below the laboratory LOR or the adopted screening criteria.

Table 9-5 Groundwater Exceedance Summary

Analyte	Adopted Criteria	Sample Location	Laboratory Result
Cadmium (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (0.2 µg/L)	MW02	0.4 µg/L
		QC100	0.3 µg/L
	ANZG (2018) Freshwater 99% toxicant DGV (0.06 µg/L)	MW04	0.1 µg/L
		QA100	0.2 µg/L
Copper (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (1.4 µg/L)	MW02	100 µg/L
		MW03	2 µg/L
		MW04	4 µg/L
		QA100	12 µg/L
		QC100	30 µg/L
Mercury (filtered)	ANZG (2018) Freshwater 99% toxicant DGV (0.06 µg/L)	MW05	1.1 µg/L
Nickel (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (11 µg/L)	MW02	349 µg/L
		MW03	61 µg/L
		MW04	39 µg/L
		QA100	94 µg/L
		QC100	79 µg/L
	NHRMC 2008 Health (200 µg/L)	MW02	349 µg/L
Zinc (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (8 µg/L)	MW01	25 µg/L
		MW02	298 µg/L
		MW03	16 µg/L
		MW04	133 µg/L
		QA100	208 µg/L
PFOS	PFAS NEMP 2.0 Table 5 Freshwater 99% (0.00023 µg/L)	MW01	0.0013 µg/L
		MW02	0.0017 µg/L
		MW03	0.0006 µg/L
		MW04	0.0109 µg/L
		MW05	0.0105 µg/L
		QA100	0.0092 µg/L

9.4 Surface Water

9.4.1 Field Observations

Three (3) surface water samples were collected from the dam within the western portion of the site. The location of the sampling points is presented in **Figure 2**, **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 as described above for sediment field observations.

The water quality parameters in **Table 9-6** were gathered on-site during surface water sampling and observations noted by the sampler are provided in **Table 9-7**.

Table 9-6 Surface Water Quality Parameters

Sample ID	Sampling Date	pH	Electrical Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	Temp °C
SW01	8/10/2024	9.8	373	10.0	21
SW02	8/10/2024	9.8	373	9.7	21
SW03	8/10/2024	9.8	373	10.1	22

Table 9-7 Surface Water Field Observations

Sample ID	Date	Observations
SW01	8/10/2024	Grasses and reeds surrounding the surface water body embankment. Observations of the water body included low to moderate turbidity, with a slight brown colouration. Low to moderate sulfidic odour was noted during sampling.
SW02	8/10/2024	
SW03	8/10/2024	

9.4.2 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**.

The surface water samples analysed contained contaminant concentrations below the laboratory LOR, or the adopted criteria, except for the samples outlined below in **Table 9-8.**

Table 9-8 Surface Water Exceedances Summary

Analyte	Adopted Criteria	Sample Location	Laboratory Result
Copper (filtered)	ANZG (2018) Freshwater 95% toxicant DGV (1.4 µg/L)	SW02	2 µg/L
		SW03	6 µg/L
		QA100	5 µg/L
		QC100	3 µg/L
Copper (filtered)	ANZG (2018) Freshwater 99% toxicant DGV (1 µg/L)	SW02	2 µg/L
		SW03	6 µg/L

Analyte	Adopted Criteria	Sample Location	Laboratory Result
		QA100	5 µg/L
PFOS	PFAS NEMP 2.0 Table 5 Freshwater 99% (0.00023 µg/L)	SW01	0.0010 µg/L
		SW02	0.0014 µg/L
		SW03	0.0018 µg/L
		QA100	0.0010 µg/L
		QC100	0.0012 µg/L

10 Salinity Assessment

The following information was reviewed to assess salinity risk associated at the proposed New High School for Jordan Springs:

- Topography changes (based on cut/fill plan).
- Soil profile characteristics, mainly texture. A total number of thirty-six (36) samples were assessed for Particle Size Analysis (PSA) to determine the texture of soils onsite ranging from depths between surface to 6.0 mBGL.
- Soil profile chemistry. A total number of twenty-four (24) samples were assessed for EC, pH, Cl ranging from depths between surface to 2.0 mBGL.
- Any changes in water balance to the site (based on current use and development plans).
- Depth to groundwater (from field measurements in Site wells).
- Quality of the groundwater, EC (from field measurements and laboratory results).
- Quality of the water used for irrigation and/or in storages (provided by the client team).

The review of documents provided by DoE (cut and fill plan and concept design), laboratory analysis, desktop review (publicly available datasets) along with the following assumptions were used to evaluate salinity risk:

- No Digital Elevation Model (DEM) of the site pre- and post-activity has been presented, which limits the assessment of spatial salinity risk. It is assumed that the post-development topography slopes from south to north, with the highest point to the south, mimicking the pre-construction topography. Consequently, the fill is approximately 5 meters across the site.
- Multiple soil profiles were characterised across the site area up to a depth of 6 metres. The characteristics are noted to be highly variable and without spatial structure the quality of the spatial salinity risk assessment is limited.
- Selected soil profiles were assessed for soil chemistry relevant to salinity risk. However, the dominance of fill material prevents an accurate assessment of the inherent soil salinity profile. Therefore, the salinity risk assessment is based solely on the highly variable imported soil profile.
- Stantec understand that the activity site was cleared of existing trees and vegetation prior to the fill being imported. Post activity, vegetation was based on the draft preliminary design that is assumed to consist of trees (unknown species) and grassed areas (assumed couch grass).
- It is assumed that post onsite activities, irrigation will be applied to all areas under vegetation consisting of trees and grass to meet crop water demand.
- Depth to the groundwater ingress was observed to occur between 4 to 6.5mBGL. SWL measured onsite in installed groundwater monitoring wells ranged between 12.89 – 17.97 mAHD.
- Groundwater salinity levels varied between 3500 – 13500 mS/cm with the onsite dam recording salinity at 373 mS/cm.
- It is understood based on information provided to Stantec that irrigation of the site will utilise captured rainwater and any shortfall will be supplied from potable water.

10.1 Potential Activities' impact on salinity risk

Factors that impact salinity risk of the proposed activity within the Site are as follows:

- The importation of fill material has raised the natural soil surface, increasing the distance to groundwater to at least 4 meters. This reduces the risk of saline groundwater rising. Additionally, the natural slope towards South Creek allows for drainage if groundwater rises.
- The textural range of the fill material appears to be between a silty clay and a gravelly sand. Generally, the imported material was between a silty loam to a gravelly loam.
- Analysis indicated the soil pH is highly alkaline which indicates potential sodicity which is also associated with salinity development.
- Salinity and chloride assessments to a depth of 2.0 metres show that the soil salinity rating is very low to medium (Shaw 1999) with the highest ECs recorded of 2.99 dS/m and an average of 1.4 dS/m.
- Approximately 30% of the area will be covered with buildings with the vegetation removed. Nevertheless, the sparse nature of the pre-existing tree canopy will remain, albeit replanted, with most of the area grassed. The degree of vegetation changes impacts the recharge/discharge of the groundwater under the development site.

10.2 Risk assessment approach

The risk posed by salinity on the proposed activity at the site reflects the combination of the adverse consequence of salinity (such as salt damage to foundations or stressed/death of vegetation) and the likelihood of this consequence occurring. A matrix can be used to illustrate the interaction between consequence and likelihood, as shown on the following table.

Risk Matrix		Consequence			
		Acceptable	*Tolerable*	*Unacceptable*	*Intolerable*
Likelihood	*Improbable*				
	Possible				
	Probable				

Descriptions of the consequence and Likelihood categories are as follows:

Consequence:

- *Acceptable* *No measurable salinity risk impact.*
- *Tolerable* *Salinity impact manageable with minor intervention.*
- *Unacceptable* *Salinity impact requires a significant intervention and cost.*
- *Intolerable* *Salinity impacts causes unavoidable damage to infrastructure and vegetation.*

Likelihood

- *Improbable* *unlikely to occur over the design life.*
- *Possible* *could occur over the design life.*
- *Probable* *Likely to occur over the design life.*

10.3 Evaluation of salinity risk

The salinity risk assessment considered the following factors:

- Depth to groundwater.
- Changes in recharge and discharge potential.
- Changes in water quality infiltrated across the Site.
- Spatial variation of potential salinity risk.

These factors are not mutually exclusive and have a high degree of interdependence. Nevertheless, each factor is assessed independently.

10.3.1 Depth to groundwater

The depth to groundwater impacts the risk of the saline groundwater capillary rise to within the plant root active zone and constructed footings. The depth to the groundwater at the site is at least 4 metres which is unlikely to result in any saline soil condition developing due to proximity to groundwater.

The depth to the groundwater and any likely changes due to the proposed activity presents a very low risk to salinity developing that impacts the proposed new Jordan Springs High School.

10.3.2 Recharge and discharge

Despite losing approximately 30% of the land to buildings, irrigation is likely to increase groundwater recharge by approximately 9%. This could raise groundwater levels if lateral flow is minimal. However, the elevated position of the site and the loam soil texture make lateral groundwater movement likely, reducing the risk of salinity impacts.

Whilst there is a probable increase in the recharge to groundwater, the risk to salinity development is acceptable based on the soil conditions characterised.

10.3.3 Water quality

Use of captured rainwater as the main irrigation water source forms the lowest risk of introduced salts to the proposed Jordan Springs High School. It is understood that any shortfall in captured rainfall will be met through the use of potable water with a maximum allowable EC of 600 mg/L. The combined effect of the planned irrigation water source on salt loads to the Jordan Springs High School landscape is a low, hence, salinity risk due to irrigation is low.

Therefore, given the primary use of captured rainfall for irrigation, the salt load on the landscape is very low and leaching has also been increased resulting in an improbable likelihood of salinity developing due to the water quality used for irrigation.

10.3.4 Spatial variation in salinity risk

Despite the lack of topographic detail and the highly variable characteristics of the imported material, the risk of salinity developing anywhere within the New High School for Jordan Springs site is very low.

10.3.5 Risk evaluation summary

Based on information provided in **section 10.3.1 to section 10.3.4** a salinity risk assessment is summarised below in **Table 10-1.**

Table 10-1 Salinity Risk Matrix

Risk Factor	Likelihood	Consequence	Risk
Change in groundwater depth	Possible	Acceptable	Very Low
Change to recharge and discharge	Probable	Acceptable	Low
Change in water quality	Improbable	Acceptable	Very Low
Spatial variation in salinity risk	Possible	Acceptable	Very Low

Due to the low risk of salinisation developing as a result of the proposed activity there is no requirement for a salinity management plan.

11 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 6.2**. Details of the QA/QC assessment are provided in **Appendix H**.

The data validation procedure employed in the assessment of the field and laboratory QA/QC data and shown above has indicated that the reported analytical results are representative of the conditions at the sample locations and that the analytical data can be relied upon for the purpose of these works. It is concluded that overall, the quality of the analytical data produced is acceptable and reliable for the intended purpose.

12 Discussion

12.1 Soil

12.1.1 Human Health Criteria

The soil samples were assessed against the human health criteria applicable to the proposed future land use, considerate of the design drawings available at the time of preparing this DSI report.

Contaminant concentrations in soil were reported either below the laboratory LOR or the adopted human health assessment criteria for proposed future land use scenarios. In consideration of soil conditions encountered during this DSI and prior investigations completed by other consultants, soils within the site do not present an unacceptable risk to human health under the proposed future land use.

12.1.1.1 Asbestos

Asbestos material has not been observed or identified during this investigation. An intrusive soil investigation across the entirety of the site did not identify the presence of ACM (asbestos containing material) within any fill or natural soil samples collected.

Sample locations were constrained to open grassed areas. This sampling methodology limits observations of subsoils and sampling opportunities beneath hardstand surfaces (i.e. pedestrian paths and residential roads) to assess for asbestos, and as such those areas remain unassessed.

12.1.2 Ecological Criteria

The soil samples were assessed against ecological criteria applicable to the proposed land use, 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.

12.1.3 Aesthetic Considerations

Schedule B1, Section 3.6 of the NEPM (NEPC, 2013) offers guidance on assessing soils based on aesthetic values. This assessment considers the impact of low-concern or non-hazardous inert foreign materials in soil or fill material, resulting from human activities.

Areas targeted by this investigation were generally selected based on having an elevated risk of contamination, including locations potentially impacted by the presence of potential filling. Observations of anthropogenic materials in fill were predominantly traces of plastic, concrete, bricks, and metal generally within surficial soils but observed to a maximum depth of 3.5 m BGL at sampling location TP07.

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. 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.

12.2 Sediment

Concentrations of analytes were reported below the adopted ecological screening criteria for the sample analysed. The risk is considered low due to the absence of such contaminants in sediments surrounding the dam / basin.

12.3 Groundwater

12.3.1 Human Health Criteria

The groundwater samples were assessed against the human health criteria applicable to the proposed future land use, considerate of the design drawings available at the time of preparing this DSI report.

Contaminant concentrations in groundwater were reported either below the laboratory LOR or the adopted human health assessment criteria for the current and proposed future land use scenarios with exception to:

- Nickel (filtered) exceeding the adopted NHRMC Health (2008) criterion (200 µg/L) at sample location MW02 (349 µg/L). Stantec consider this to be a localised exceedance in perched aquifer surrounding MW02 due to lower concentrations being reported in all other monitored wells onsite. Similarly, Stantec consider the interaction of elevated nickel in groundwater unlikely given it's presence in the perched aquifer which are typically isolated from other groundwater systems and surface water bodies.
- In addition, exposure to maintenance workers is unlikely to occur based on depth of groundwater encountered (4.90 mTOC), greater than 2 – 3 mBGL where interaction with workers may occur.

12.3.2 Ecological Criteria

The groundwater wells that were able to be sampled are targeting an aquifer in weathered shale. This has been inferred from the noted SWLs during groundwater gauging, and soil and geological assessment during drilling and well installation records.

Metals

Some dissolved metals including cadmium, copper, nickel and zinc were reported at concentrations above the adopted ecological screening criteria. The elevated concentrations of metals are inferred to be reflective of the natural background levels (for metals such as cadmium) within the alluvial floodplain deposits and Bringelly shale, which is within proximity to the site. This is supported by the absence of elevated metals concentrations in soil, indicating no on-site source. The mercury concentration in sampling location MW05 (1.1 µg/L) exceeded the adopted ecological screening criteria, indicating a

possible anthropogenic source, likely off-site based on the absence of mercury in soil. When reviewing the site history, laboratory data and inferred groundwater flow, there is no clear on-site source or trend for the mercury exceedances. However, on-site stormwater infrastructure and/ or off-site regional residential/ industrial use may be impacting groundwater quality beneath the site.

pH

A highly alkaline pH was recorded in groundwater at MW05, differing to all other wells which recorded slightly to moderately acidic conditions onsite. pH readings within monitoring well MW05 has remained consistent throughout the development and monitoring stages of works.

Monitoring well installation at MW05 utilised a coring methodology and was installed predominantly for geotechnical purposes and was opportunistically utilised for environmental assessment of groundwater conditions. pH readings are considered to be attributed to potential grout ingress as opposed to regional groundwater conditions within the site area.

MW05 is located toward the western portion of the site, which is inferred to be upgradient. The four other wells on site, including some down-gradient of MW05, possessed a slight to moderate acidity and were relatively comparable, most likely to represent local groundwater conditions. Based on this the conditions at MW05 are considered localised.

PFOS

PFOS exceedances of the 99% protection criteria were reported for all analysed groundwater samples across the site. PFAS was not identified in any soil samples collected and analysed from within the site, and as such the contaminant is unlikely to be originating from an on-site source.

The greatest concentrations of PFOS were reported in samples MW04, MW05 and QA100 (duplicate of MW04), where concentrations were one order of magnitude greater than the concentrations reported in MW01 and MW02. Monitoring wells MW04 and MW05 are situated toward the higher elevations of the western site boundary, indicating that an off-site source may exist to the west (off-site).

PFOS concentrations were also compared against the draft NEMP 3.0 PFAS 99% protection criteria, revealing three (3) exceedances (MW04, MW05 and QA100). Based on Stantec's understanding of the proposed land use, the exceedances are not considered to pose a significant risk to on-site ecological receptors. If regionally present in groundwater, it is likely that the downgradient receiving environment would also be impacted by low levels of PFOS.

Under a scenario where groundwater is used for irrigation, extracted during construction, utilised during operation and/or dewatering, a complete source receptor pathway linkage may exist to ecological receivers depending on the management and fate of such waters. In this instance, further assessment

would be necessary. Based on Stantec's understanding of the proposed land use, interactions with groundwater would be unlikely except for building piles.

Construction Consideration

Groundwater interactions occur during construction, such as during piling, appropriate mitigations and controls are required under the contractors Construction Environmental Management Plan (CEMP) so that potential impacts to ecological receptors or adverse impact on the piles does not occur.

12.4 Surface Water

12.4.1 Human Health Criteria

The surface water samples collected from the on-site basin / dam contained contaminant concentrations below the applicable human health screening criteria. Considerate of the design drawings available at the time of preparing this DSI report, the sampled surface waterbody likely to be decommissioned and backfilled. Under this construction scenario, water contained within the on-site dam is unlikely to present a potential risk to human health.

12.4.2 Ecological Criteria

Metals

The majority of surface water samples collected from the on-site basin / dam contained dissolved copper concentrations that exceeded the adopted criteria for freshwater 95% toxicant DGV. As noted above, it is understood that the basin / dam will be decommissioned and backfilled under the proposed activities scenario, and discharges of surface water off-site will likely be via a constructed stormwater network and through surface water runoff. Given that elevated metals concentrations were not detected in soil, unacceptable impacts to ecological receptors post-construction are not anticipated.

PFAS

Surface water samples contained PFOS concentrations above the NEMP 2.0 Table 5 Freshwater 99% value. An on-site source of PFOS in soil was not identified during the investigation, however, it is understood that the basin collects stormwater from the nearby residential roads. The low level PFOS impacts in surface water may be attributable to upgradient surface water run-off and/or the PFOS identified in groundwater, which is thought to be a potential regional impact.

The cut and fill plans (**Appendix C**) show that the dam is proposed to be filled with approximately 6m of material under the proposed activities. This would render the source-pathway-receptor linkage incomplete.

Construction Consideration

During decommissioning of the basin / dam, the fate of surface water is to be assessed appropriately to inform management options, which include on-site reuse (e.g. for dust suppression), off-site discharge and off-site disposal. Appropriate mitigations and controls are also required to be incorporated into the contractors Construction Environmental Management Plan (CEMP) so that potential impacts to ecological receptors does not occur.

12.5 Acid Sulfate Soils

Soil samples exceeding the ASSMAC (1998) thresholds, indicating the potential for ASS conditions, were collected at BH01 (at 5m BGL), BH03 (at 4.5 m BGL and 5 m BGL), BH12 (at 5.5 m BGL) and BH202 (at 6 m BGL).

Due to the potential presence of ASS in soils beneath the site, Stantec recommends that an Acid Sulfate Soils Management Plan (ASSMP) be prepared if the materials are to be disturbed during construction, requiring consideration of design plans, bulk earthworks, construction methodologies, dewatering scenarios and interactions with buildings and structures (including piles). Refer to **Section 15.1** for further details.

13 Revised 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 13-1** below.

Table 13-1 Revised Conceptual Site Model

Contamination Source	Potentially Impacted Media	Contaminants of Potential Concern	Potential Exposure Pathways	Receptors	Likelihood of complete exposure pathway
Potentially contaminated fill materials imported to the site	Soils	Metals, TRH, BTEX, PAH, OCP/OPP, asbestos, PFAS, VOC, TCE	▪ 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) and students / staff. **Ecological:** • Receiving water bodies. • Flora and fauna dependant on soil and waters in potentially impacted areas.	Incomplete source-pathway-receptor linkage determined based on current data.
Dam sediments	Sediments	Metals, TRH, BTEX, PAH, OCP/OPP, PFAS, VOC, TCE	▪ Dermal contact ▪ Ingestion ▪ Inhalation ▪ Direct uptake		Incomplete source-pathway-receptor linkage determined based on current data.
Dam water	Water	Metals, PFAS	▪ Dermal contact ▪ Ingestion ▪ Inhalation ▪ Direct uptake		Low to moderate: select chemical contaminants are present in the dam water. Whilst the risk to human health or the environment is likely low, the client should identify an appropriate disposal or discharge approach for the commencement of infilling the dam basin.

Contamination Source	Potentially Impacted Media	Contaminants of Potential Concern	Potential Exposure Pathways	Receptors	Likelihood of complete exposure pathway
Historical ADI's explosives factory for ordnance and ammunition filling, tested and related procedures	Soil Groundwater	VOCs, TCE, PCE, TCA	▪ Vapour intrusion		Incomplete source-pathway-receptor linkage determined based on current data.
Impacted groundwater onsite	Groundwater	PFAS Metals pH	▪ Direct contact ▪ Incidental contact ▪ Incidental inhalation		Low to moderate: groundwater has the potential to come into contact with human receptors during construction and/ or excavation works. Although the contamination status of the groundwater is considered low, if groundwater seepage is encountered during construction, advice on the management water is necessary from a contaminated land consultant. MW05 appears localised and would not prohibit the proposed activities. Alkaline pH readings appear to be attributed to potential grout ingress within the installed monitoring well and are unlikely to impact the validity of obtained laboratory results for this monitoring well.

14 Data Gaps and Uncertainties

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

- Current data indicates that low level detections of metals and PFOS in surface water and groundwater may originate from an off-site source, noting that the upgradient lands are urbanised and developed. Where waters may be interacted with and/or utilised on site, water quality should be further assessed post-approval to inform the design and any water quality management requirements for construction.
- Hand tools were utilised for sampling at certain locations due to access constraints. This sampling methodology limits observations of subsoils and visual assessment for contaminant indicators, particularly asbestos. Based on the characterisation of fill this data gap is considered a low risk and can be mitigated through an unexpected finds protocol during earthworks and construction.
- The site has been subjected to relatively recent bulk filling, which appears to have been undertaken under quality assurance protocols to prevent importation of contaminated materials. Whilst a low risk has been established based on available information, due to the volume of fill, Stantec are unable to confirm that all imported fill soil is free of contamination and/or unsuitable materials. This data gap can be mitigated through an unexpected finds protocol during earthworks and construction.
- The recorded alkaline pH reading encountered at MW05, which differs to other wells, cannot be attributed to an on-site source with current information and appears to be attributed to grout ingress following installation and are unlikely to impact the validity of obtained laboratory results for this monitoring well.
- Soils below existing hardstand, drainage channels, infrastructure and culverts were unable to be assessed. Based on the characterisation of fill this data gap is considered a low risk and can be mitigated through an unexpected finds protocol during earthworks and construction.
- Total metals were not obtained as part of the surface water monitoring conducted onsite. Therefore, dissolved metals have been compared to the adopted ADWG guidance.
- No information was presented about the irrigation management nor the area that irrigation will be applied onsite.
- Based on the uncertainty of the initial salinity level of the imported soil and the inconsistency in measured soil profile salinity, no conclusions can be drawn from this salinity assessment.

15 Conclusions

Stantec has completed a DSI to support the proposed activities associated with the new High School for Jordan Springs under Part 5 of the Environmental Planning and Assessment Act 1979 (EP&A Act) and State Environmental Planning Policy (Transport and Infrastructure) 2021 (SEPP TI). The site is located at Corner of Infantry Street and Armoury Road, Jordan Springs NSW and legally identified as Part Lots 2 & 3 Lots Deposited Plan (DP) 1248480 (herein referred to as 'the site'). The DSI was supplementary to previous investigations and should be read in conjunction with existing reports.

The proposed activities broadly consist of the following:

- A capacity of 1,000 students and 80 staff to meet forecast enrolment demand associated with population growth in Jordan Springs and Ropes Crossing.
- The school will provide permanent General Learning Spaces (GLS), Support Learning Spaces (SLS), staff facilities and a library across three (3), three storey buildings, a single storey hall, half playing field, three (3) outdoor sport courts, 72 operational at grade parking spaces (including two (2) accessible spaces), 100 bicycle spaces and landscaping.

The objectives of the investigation were to:

- To undertake site investigation to determine the type, extent and level of contamination for the site to provide more complete and definitive information on issues raised in the preliminary site investigation.
- Make recommendations for management, remediation and/or further investigation.
- Assess the site in consideration of Part 5 of the Environmental Planning and Assessment Act 1979, Section 5.5 Duty to consider environmental impact.

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

- Exceedances of the applicable groundwater criteria for metals (include cadmium, copper, mercury, nickel, and zinc) were identified in all analysed sample locations (MW01, MW02, MW03 MW04 and MW05). The elevated concentrations of metals are inferred to be reflective of the natural background levels (for metals such as cadmium) within the alluvial floodplain deposits and Bringelly shale, which is within proximity to the site. This is supported by the absence of elevated metals concentrations in soil, indicating no on-site source. The mercury concentration in sampling location MW05 (1.1 µg/L) exceeded the adopted ecological screening criteria, indicating a possible anthropogenic source, likely off-site based on the absence of mercury in soil and sediment.
- PFOS exceedances of the 99% protection criteria were reported for all analysed groundwater samples across the site, with the greatest concentrations in groundwater wells installed near to the western boundary at the highest site elevations (MW04, MW05). PFAS was not identified in any soil samples collected and analysed from within the site, and as such the contaminant is unlikely to be originating from an on-site source. Based on groundwater data, the source of PFAS in groundwater is most likely to the west of the site (off-site).
  - Based on Stantec's understanding of the proposed land use, the exceedances are not considered to pose a significant risk to on-site ecological receptors. If regionally present in

groundwater, it is likely that the downgradient receiving environment would also be impacted by low levels of PFOS.
  - Under a scenario where groundwater is used for irrigation, extracted during construction, utilised during operation and/or dewatering, a complete source receptor pathway linkage may exist to ecological receivers depending on the management and fate of such waters. In this instance, further assessment would be necessary. Based on Stantec's understanding of the proposed land use, interactions with groundwater would be unlikely except for building piles.
- A highly alkaline pH was recorded in groundwater at MW05, differing to all other wells which recorded slightly to moderately acidic conditions. Monitoring well installation at MW05 utilised a coring methodology and was installed predominantly for geotechnical purposes and was opportunistically utilised for environmental assessment of groundwater conditions.
  - MW05 appears localised and would not prohibit the proposed activities. Alkaline pH readings appear to be attributed to potential grout ingress within the installed monitoring well and are unlikely to impact the validity of obtained laboratory results for this monitoring well.
- The majority of surface water samples collected from the on-site basin / dam contained dissolved copper concentrations that exceeded the adopted criteria for freshwater 95% toxicant DGV. Given that elevated metals concentrations were not detected in soil, unacceptable impacts to ecological receptors post-construction are unlikely. Surface water samples contained PFOS concentrations above the NEMP 2.0 Table 5 Freshwater 99% value. The low level PFOS impacts in surface water may be attributable to upgradient surface water run-off and/or the PFOS identified in groundwater, which is thought to be a potential regional impact.
- There were no exceedances of applicable screening criteria for human health or ecological receptors in soil or sediment samples collected and analysed.
- Soil samples exceeding the ASSMAC (1998) thresholds were collected at BH01 (at 5m BGL), BH03 (at 4.5 m BGL and 5 m BGL), BH12 (at 5.5 m BGL) and BH202 (at 6 m BGL). An ASSMP would be required for construction if the ASS is encountered and/or interacted with during construction.
- In consideration to the assumptions and limitations of the salinity risk assessment, it can be concluded that the proposed activity poses a low risk of salinisation. Therefore, a salinity management plan is not required.

From the findings of this investigation, and in consideration historical reports, the site is considered suitable for the proposed land-use as a high-school with associated ancillary infrastructure. Whilst unlikely to impact the suitability of the site, the data gaps and uncertainties identified in this report must be addressed, and the specified mitigation measures adopted.

Based on the findings of this assessment, both activities scenarios (inclusive of construction of a temporary OSD basin, Scenario 2) presented in **Section 2.1.2** are considered suitable options to facilitate future site activities, noting that a separate planning pathway is required for construction of a permanent off-site basin.

15.1 Mitigation Measures & Recommendations

Based on the findings of this assessment and with reference to the proposed activities, purpose and objectives, the following mitigation measures are identified in **Table *15-1*** and recommendation as outlined below:

- Stantec were advised by DOE that the construction timing for the proposed development is anticipated to commence mid to late 2025, upon completion of the approvals process. Stantec recommends that groundwater levels and quality be monitored on a quarterly basis to provide a baseline on groundwater conditions prior to commencement of construction.
- All future works should be conducted as per a suitable Construction and Environmental Management Plan (CEMP), which incorporates an Unexpected Finds Protocol (UFP), to minimise potential risks to human health and the environment during construction.
- Any material being removed from site must be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order. Any future classification must be considerate of the data and information provided in this document and other historical reports relating to contamination.

Table 15-1 Mitigation Measures Table

Mitigation Number/ Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
Managing Potential Acid Sulfate Soils (ASS)	When ASS is to be encountered and/or interacted with during construction	Preparation of an Acid Sulfate Soil Management Plan (ASSMP) for implantation during construction, considerate of the findings of this investigation. Supplementary data may be required depending on the design parameters.	ASS, if not managed appropriately, can impact the environment and have deleterious effects on building materials.
Water quality management	Post-approval and during the design process, but prior to commencement of construction activities	Undertake quarterly groundwater level and quality monitoring to provide an understanding of baseline conditions. Consideration of surface water and groundwater properties (quality and levels) to inform the management requirements for construction.	Management options for water can vary depending on their properties. Options can only be evaluated in consideration of water conditions and the potential receiving environment.
Unexpected finds protocol	Prior to construction	An unexpected finds protocol is to be incorporated into the contractors CEMP so that previously unidentified contamination is managed appropriately. Potential unexpected finds identified as data gaps are as follows: - Previously unidentified contaminated soil due to access constraints	If not managed appropriately, unexpected contamination and/or soil properties can present potential health risks to human and ecological receptors and can also impact the project delivery program and budget.

		- Potential contamination and/or salinity risk associated with recently imported fill soils - Soils below existing hardstand, drainage channels, infrastructure and culverts	
Managing spoil proposed for offsite disposal and/or reuse.	Prior to removal to an offsite licensed facility.	Any material being removed from site must be classified for off-site disposal in accordance the EPA (2014) Waste Classification Guidelines and/or an applicable NSW EPA Resource Recovery Order. Any future classification must be considerate of the data and information provided in this document and other historical reports relating to contamination.	Negative outcomes including: • Regulatory penalties. • Health risks associated with improperly disposed soils. • Legal liabilities associated with non-compliance of waste disposal.
Changes to the proposed activities	Prior to commencement of construction activities if proposed activities need to be altered or modified.	In accordance with the Environmental Planning and Assessment Act (1979 (EP&A Act), Guidelines for Division 5.1 assessments (June 2022), any modifications will need to be assessed by either preparing a new REF document, or a REF document addendum. Section 5.4 of the EP&A Act does not require an assessment of a proposed modification in very limited circumstances – being a medication *whose environmental impact has already been considered, that will reduce its overall environmental impact.*	To ensure that proposed activities will not have a significant impact on the environment.

15.2 Evaluation of Environmental Impacts

Based on the findings of this assessment, the potential risks are not considered to have a significant effect on the environment following the implementation of the above mitigation measures (as required).

16 Limitations

The agreed scope of this assessment has been limited for the current purposes of the Client, and based on access limitations identified herein. The assessment may not identify contamination occurring in all areas of the site or occurring after sampling was conducted. Subsurface conditions may vary considerably away from the sample locations where information has been obtained.

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 regard 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 considered in the Document. Accordingly, additional studies and actions may be required.
- 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.

This assessment report is not any of the following:

- A geotechnical report and the bore logs/test pit logs may not be sufficient for geotechnical advice.
- A site audit report or site audit statement as defined under the Contaminated Land Management Act 1997.

- 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 study area to determine suitability of the entire parcel of land at the study area for one or more beneficial uses of land.
- A ground gas risk assessment.

Appendix A Figures

Site Locality Plan

Infantry Street, Jordan Springs NSW

Project Code: 305001663
Drawn By: CM, Checked By: FT
Figure No: 01 | Rev: 01
Date: 2024-11-07

Stantec

Legend

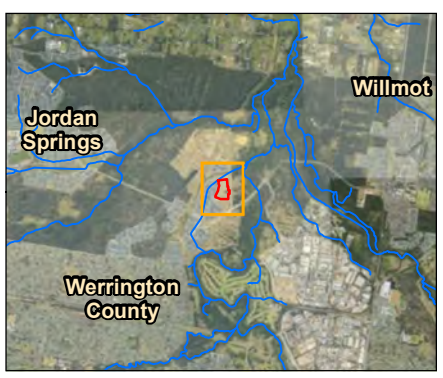
- Site Boundary
- Map Extent
- Cadastre (NSW SS, 2023)
- Watercourse (NSW SS, 2023)
- Contour (NSW SS, 2022)

Notes:
1. Coordinate System: GDA 1994 MGA Zone 56

References:
1. Aerial imagery supplied by Metromap (September, 2024)

0 15 30 45 60 75 Metres

Scale at A3 1:2,000



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Sample Plan

Infantry Street, Jordan Springs NSW

Project Code: 305001663
Drawn By: CM, Checked By: FT
Figure No: 02 | Rev: 01
Date: 2024-11-07

Stantec

Legend

- Site Boundary

Test Locations

- Environmental Boreholes
- Environmental Wells
- Geotech Borehole
- Geotech Wells
- Sediment Sample
- Surface Water
- Test Pits
- Cadastre (NSW SS, 2023)
- Watercourse (NSW SS, 2023)
- Map Extent

Notes:
1. Coordinate System: GDA 1994 MGA Zone 56

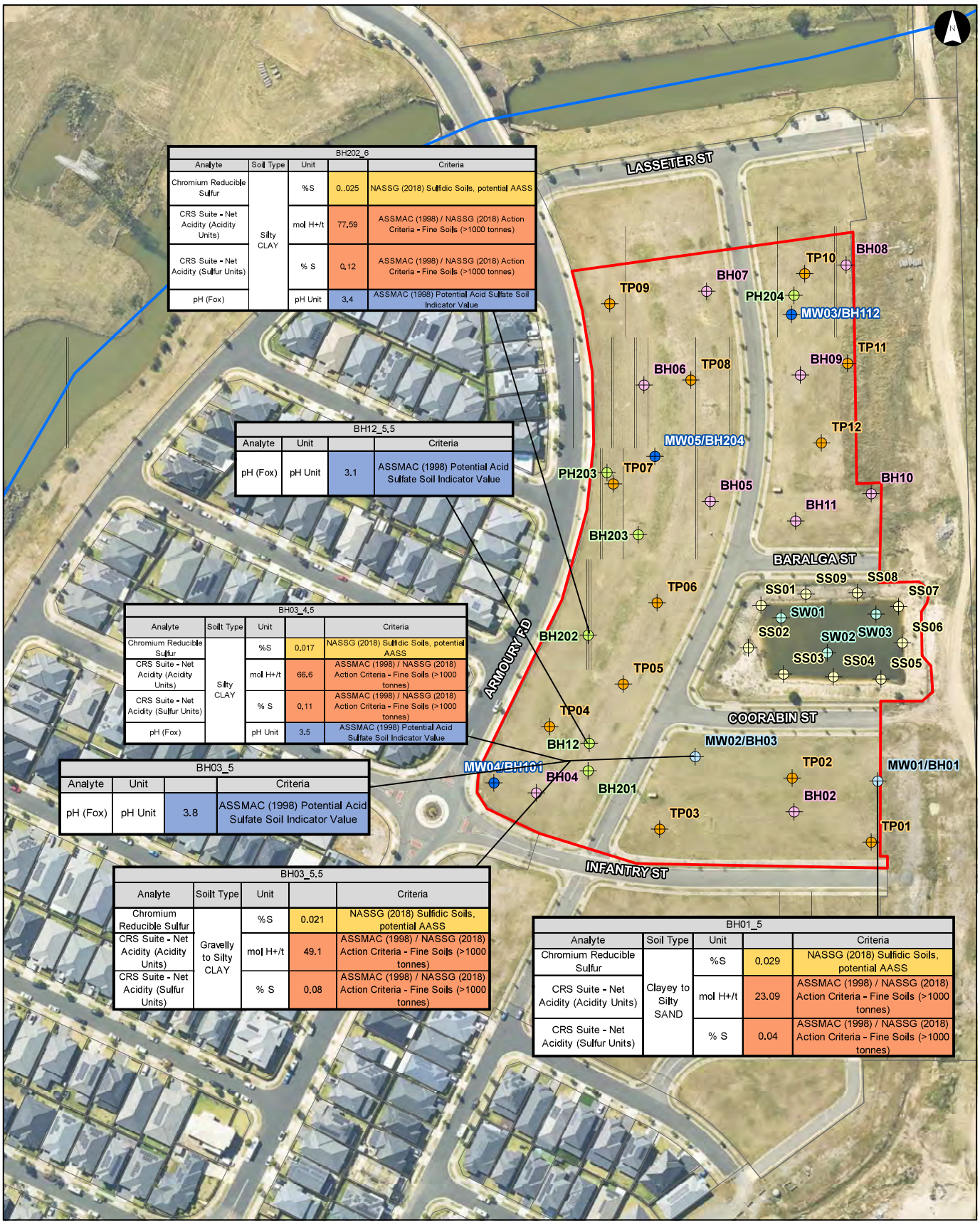
References:
1. Aerial imagery supplied by Metromap (September, 2024)

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Scale at A3 1:1,500



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BH202_6				
Analyte	Soil Type	Unit		Criteria
Chromium Reducible Sulfur	Silty CLAY	%S	0..025	NASSG (2018) Sulfidic Soils, potential AASS
CRS Suite - Net Acidity (Acidity Units)		mol H+/t	77.59	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
CRS Suite - Net Acidity (Sulfur Units)		% S	0.12	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
pH (Fox)		pH Unit	3.4	ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value

BH12_5.5			
Analyte	Unit		Criteria
pH (Fox)	pH Unit	3.1	ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value

BH03_4.5				
Analyte	Soil Type	Unit		Criteria
Chromium Reducible Sulfur	Silty CLAY	%S	0.017	NASSG (2018) Sulfidic Soils, potential AASS
CRS Suite - Net Acidity (Acidity Units)		mol H+/t	66.6	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
CRS Suite - Net Acidity (Sulfur Units)		% S	0.11	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
pH (Fox)		pH Unit	3.5	ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value

BH03_5			
Analyte	Unit		Criteria
pH (Fox)	pH Unit	3.8	ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value

BH03_5.5				
Analyte	Soil Type	Unit		Criteria
Chromium Reducible Sulfur	Gravelly to Silty CLAY	%S	0.021	NASSG (2018) Sulfidic Soils, potential AASS
CRS Suite - Net Acidity (Acidity Units)		mol H+/t	49.1	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
CRS Suite - Net Acidity (Sulfur Units)		% S	0.08	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)

BH01_5				
Analyte	Soil Type	Unit		Criteria
Chromium Reducible Sulfur	Clayey to Silty SAND	%S	0.029	NASSG (2018) Sulfidic Soils, potential AASS
CRS Suite - Net Acidity (Acidity Units)		mol H+/t	23.09	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)
CRS Suite - Net Acidity (Sulfur Units)		% S	0.04	ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)

Soil Exceedances

Infantry Street, Jordan Springs NSW

Project Code: 305001663
Drawn By: CM, Checked By: FT
Figure No: 03 | Rev: 01
Date: 2024-11-13

Stantec

Legend

- Site Boundary

Test Locations

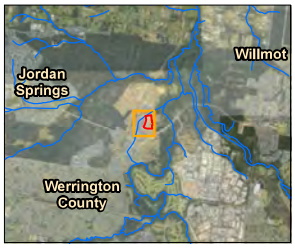
- Environmental Boreholes
- Environmental Wells
- Geotech Borehole
- Geotech Wells
- Sediment Sample
- Surface Water
- Test Pits
- Cadastre (NSW SS, 2023)
- Watercourse (NSW SS, 2023)
- Map Extent

Notes:
1. Coordinate System: GDA 1994 MGA Zone 56

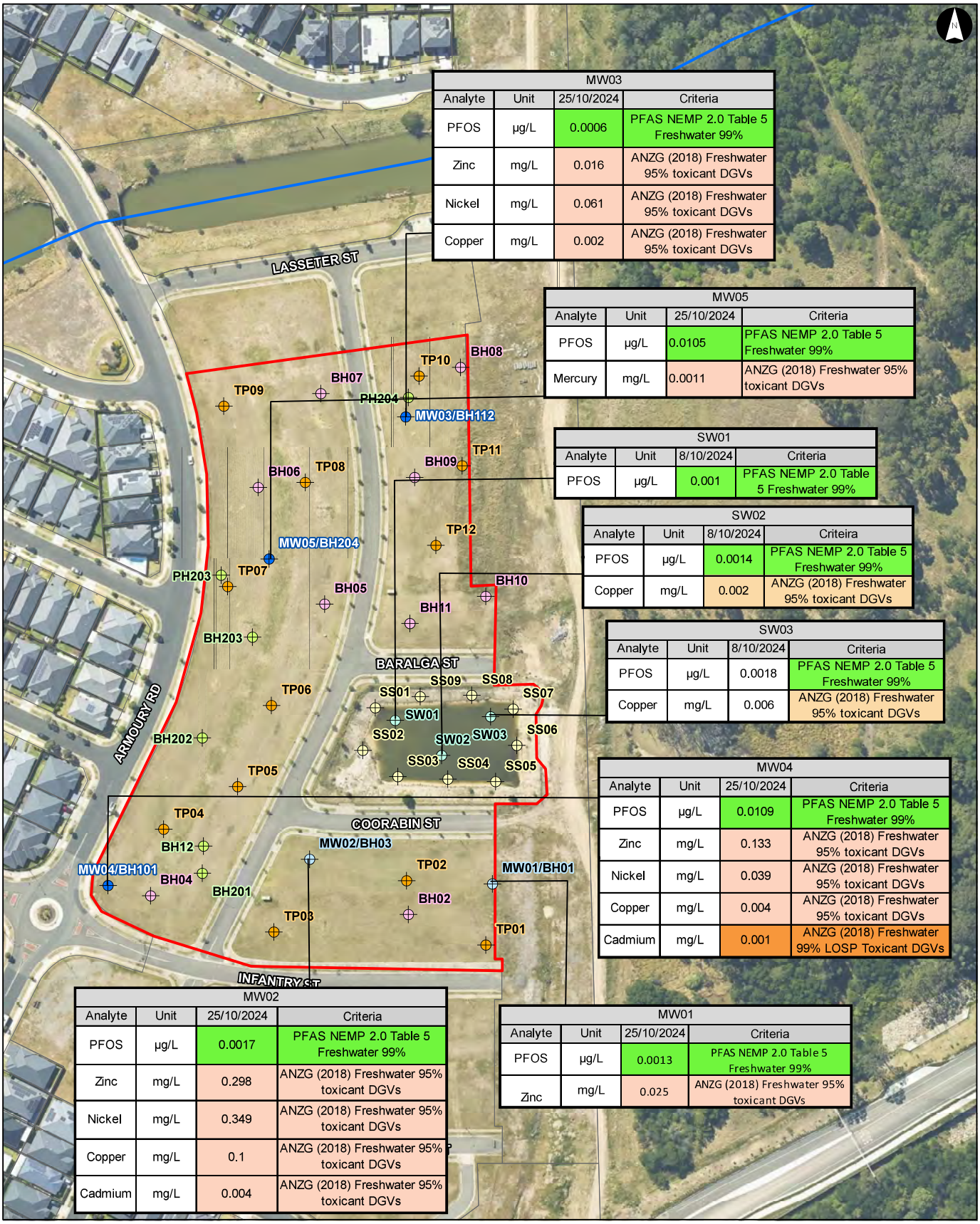
References:
1. Aerial imagery supplied by Metromap (September, 2024)

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Scale at A3 1:1,500



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MW03			
Analyte	Unit	25/10/2024	Criteria
PFOS	µg/L	0.0006	PFAS NEMP 2.0 Table 5 Freshwater 99%
Zinc	mg/L	0.016	ANZG (2018) Freshwater 95% toxicant DGVs
Nickel	mg/L	0.061	ANZG (2018) Freshwater 95% toxicant DGVs
Copper	mg/L	0.002	ANZG (2018) Freshwater 95% toxicant DGVs

MW05			
Analyte	Unit	25/10/2024	Criteria
PFOS	µg/L	0.0105	PFAS NEMP 2.0 Table 5 Freshwater 99%
Mercury	mg/L	0.0011	ANZG (2018) Freshwater 95% toxicant DGVs

SW01			
Analyte	Unit	8/10/2024	Criteria
PFOS	µg/L	0.001	PFAS NEMP 2.0 Table 5 Freshwater 99%

SW02			
Analyte	Unit	8/10/2024	Criteira
PFOS	µg/L	0.0014	PFAS NEMP 2.0 Table 5 Freshwater 99%
Copper	mg/L	0.002	ANZG (2018) Freshwater 95% toxicant DGVs

SW03			
Analyte	Unit	8/10/2024	Criteria
PFOS	µg/L	0.0018	PFAS NEMP 2.0 Table 5 Freshwater 99%
Copper	mg/L	0.006	ANZG (2018) Freshwater 95% toxicant DGVs

MW04			
Analyte	Unit	25/10/2024	Criteria
PFOS	µg/L	0.0109	PFAS NEMP 2.0 Table 5 Freshwater 99%
Zinc	mg/L	0.133	ANZG (2018) Freshwater 95% toxicant DGVs
Nickel	mg/L	0.039	ANZG (2018) Freshwater 95% toxicant DGVs
Copper	mg/L	0.004	ANZG (2018) Freshwater 95% toxicant DGVs
Cadmium	mg/L	0.001	ANZG (2018) Freshwater 99% LOSP Toxicant DGVs

MW02			
Analyte	Unit	25/10/2024	Criteria
PFOS	µg/L	0.0017	PFAS NEMP 2.0 Table 5 Freshwater 99%
Zinc	mg/L	0.298	ANZG (2018) Freshwater 95% toxicant DGVs
Nickel	mg/L	0.349	ANZG (2018) Freshwater 95% toxicant DGVs
Copper	mg/L	0.1	ANZG (2018) Freshwater 95% toxicant DGVs
Cadmium	mg/L	0.004	ANZG (2018) Freshwater 95% toxicant DGVs

MW01			
Analyte	Unit	25/10/2024	Criteria
PFOS	µg/L	0.0013	PFAS NEMP 2.0 Table 5 Freshwater 99%
Zinc	mg/L	0.025	ANZG (2018) Freshwater 95% toxicant DGVs

Groundwater and Surface WaterExceedances

Infantry Street, Jordan Springs NSW

Project Code: 305001663
Drawn By: CM, Checked By: FT
Figure No: 04 | Rev: 01
Date: 2024-11-13

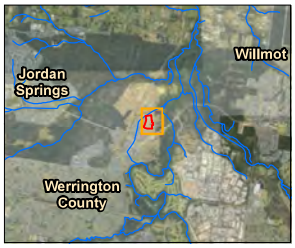
Legend
- Site Boundary

Test Locations
- Environmental Boreholes
- Environmental Wells
- Geotech Borehole
- Geotech Wells
- Sediment Sample
- Surface Water
- Test Pits
- Cadastre (NSW SS, 2023)
- Watercourse (NSW SS, 2023)
- Map Extent

Notes:
1. Coordinate System: GDA 1994 MGA Zone 56

References:
1. Aerial imagery supplied by Metromap (September, 2024)

0 10 20 30 40 50 Metres
Scale at A3 1:1,500



Stantec

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Appendix B Concept Design



6.0 PROPOSED DESIGN

6.1 Site Plan (Stage 2)

A 3 storey high school for up to 1000 students that provides a strong, articulated street presence. The school building sits outside bushfire zones and maximises the available open space allowing for a full size playing field, 4x playing courts and an open landscape setting.

The stage 2 master plan adds additional general learning teaching spaces (11) and support learning teaching spaces (3).

The design supports up to approximately 14m2 of open play space / student

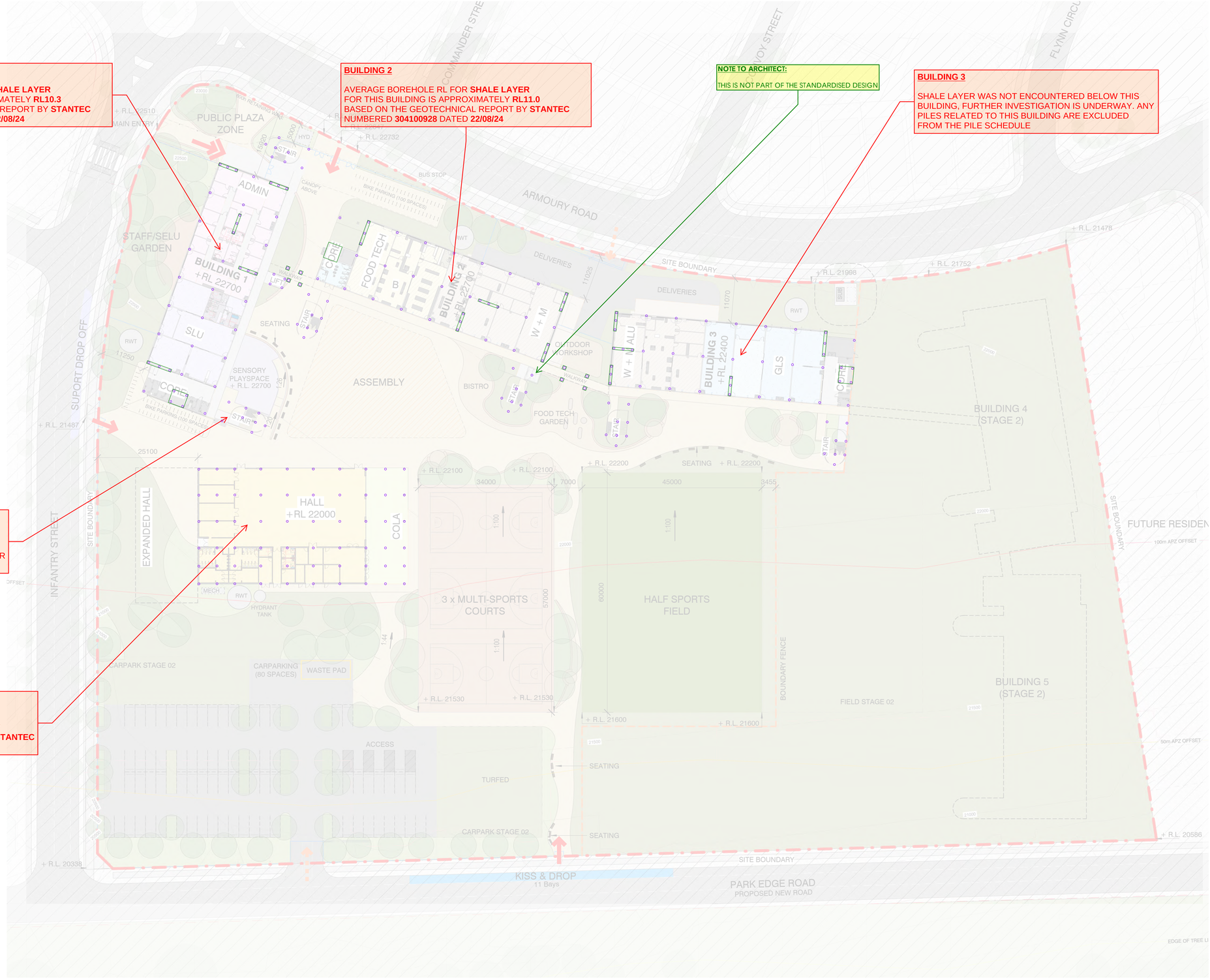
Notes:

- The final design and layout is subject to the selection of learning units and required staging
- Road reserves, building setbacks and transport infrastructure are indicative and subject to finalisation of precinct infrastructure and school transport planning
- Minor conversion of existing learning spaces may be required to facilitate an efficient stage 2 master plan
- Open play space calculation is a possible maximum. Actual area is subject to final site details, landscape design and building layout

Legend

- Site boundary
- Site setbacks (10m nom.)
- Stage 2 expansion
- Future expansion zone (if applicable)
- School entry point

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PLAN LEGEND

- PILE
- CONCRETE SHEAR/CORE WALL
- CAPPING BEAM
- RETAINING WALL
- COLUMN
- PILE CAP
- GF ON-GRADE SLAB
- GF SUSPENDED SLAB
- L1/L2 SUSPENDED SLAB
- L1/L2 LINK SLAB
- ROOF STEELWORK
- LINK STEELWORK
- DOWELLED EXPANSION JOINT (DEJ)
- PERMANENT MOVEMENT JOINT (PMJ)

NOTES:

1. ST-1000 SERIES DRAWINGS PROVIDE SITE SPECIFIC DESIGN INFORMATION. STANDARDISED STRUCTURE HAS BEEN ALTERED TO SUIT SITE SPECIFIC CONDITIONS AND DRAWN INDICATIVELY.

2. ST-2000 SERIES DRAWINGS PROVIDE STANDARDISED DESIGN INFORMATION.

CAPPING BEAMS AT SHEAR WALLS TO BE LOCATED AT NATURAL GROUND LEVEL APPROXIMATELY, SHEAR WALLS TO EXTEND DOWN BELOW GROUND FLOOR TO TOP OF CAPPING BEAMS

PILE CAPS AT COLUMNS TO BE LOCATED AT NATURAL GROUND LEVEL APPROXIMATELY, COLUMNS TO EXTEND DOWN BELOW GROUND FLOOR TO TOP OF PILE CAPS

PILE SCHEDULE

TYP. PILE BELOW	DIAMETER (mm)	ESTIMATED SOCKET LENGTH (m)
COLUMN	750	3.0
SHEAR/CORE WALL	900	14.0
STAIR/LIFT WALL	750	4.0
HALL	600	2.0

1. ESTIMATED PILE SOCKET LENGTH HAS BEEN CALCULATED FOR SOCKETING INTO **SHALE LAYER**
2. VERIFICATION OF THE PILE SOCKET LENGTH TO BE CONFIRMED WITH THE GEOTECHNICAL ENGINEERS

Rev	Description	Eng	Draft	Date
P1	100% CONCEPT	AS	AS	20.09.24

Project
Jordan Springs High School

Sheet Subject
SITE FOOTING PLAN

Client
NSW GOVERNMENT Education

Architect
djrd architects

Structural Engineer
TTW
www.ttwengineers.com

Scale at A1	Drawn	Designed	Approved
	AS	AS	GB

Project Number	Drawing Number	Revision
232024	TTW-SK-ST-1010	P1

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

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PLAN LEGEND

- PILE
- CONCRETE SHEAR/CORE WALL
- CAPPING BEAM
- RETAINING WALL
- COLUMN
- PILE CAP
- GF ON-GRADE SLAB
- GF SUSPENDED SLAB
- L1/L2 SUSPENDED SLAB
- L1/L2 LINK SLAB
- ROOF STEELWORK
- LINK STEELWORK
- DEJ — DOWELLED EXPANSION JOINT
- PMJ — PERMANENT MOVEMENT JOINT

NOTES:

1. ST-1000 SERIES DRAWINGS PROVIDE SITE SPECIFIC DESIGN INFORMATION. STANDARDISED STRUCTURE HAS BEEN ALTERED TO SUIT SITE SPECIFIC CONDITIONS AND DRAWN INDICATIVELY.

2. ST-2000 SERIES DRAWINGS PROVIDE STANDARDISED DESIGN INFORMATION.

Rev	Description	Eng	Draft	Date
P1	100% CONCEPT	AS	AS	20.09.24

Project
Jordan Springs High School

Sheet Subject
SITE GROUND FLOOR PLAN

Client: NSW GOVERNMENT Education

Architect: djrd architects

Structural Engineer: TTW www.ttwengineers.com

Scale at A1	Drawn	Designed	Approved
	AS	AS	GB

Project Number	Drawing Number	Revision
232024	TTW-SK-ST-1050	P1

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

A1 0 1 2 3 4 5 6 7 8 9 10

Appendix C Cut and Fill Plan

NOT FOR CONSTRUCTION

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THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES AND LEGENDS



BULK EARTHWORKS NOTES

1. All bulk earthworks setout from grid lines U.N.O.
2. All batters at a slope of 2 (H) : 1 (V) U.N.O.
3. Excavated material may be used as structural fill provided,
   (i) it complies with the specification requirements for fill material,
   (ii) the placement moisture content complies with the Geotechnical Consultants requirements, and allows filling to be placed and proofrolled in accordance with the specification. Where necessary the Contractor must moisture condition the excavated material to meet these requirements.
4. Compact fill areas and subgrade to not less than:

Location	Standard dry density (AS 1289 5.1.1.)	Moisture (OMC)
Under building slabs on ground:	98%	±2%
Under roads and carparks:	98%	±2%
Landscaped areas:	95%	±2%

5. Before placing fill, proof roll exposed subgrade with a 12 tonne minimum roller to test subgrade and then remove soft spots(areas with more than 3mm movement under roller). Soft spots to be replaced with granular fill U.N.O.
6. Contractor shall place safety barriers around excavations in accordance with relevant safety regulations.
7. For interpretation of bulk earthworks foot print line shown on the bulk earthworks drawings refer to the bulk earthworks construction legend.
8. Bulk earthwork drawings are not to be used for detailed excavation.
9. Refer to Geotechnical Report
10. Detailed earthworks such as piling, pile caps, ground beams, lift pits, service trenching & landscape mounding etc is excluded.

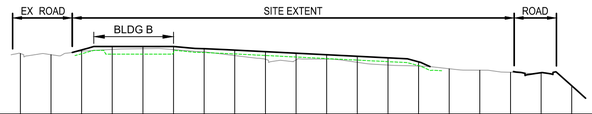


DATUM R.L. 16.00

CHAINAGE	0.00	10.00	20.00	30.00	40.00	50.00	60.00	70.00	80.00	90.00	100.00	110.00	120.00	130.00	140.00	150.00	160.00	170.00	180.00	190.00	200.00	210.00	220.00	230.00	240.00	250.00	260.00	270.00	280.00	290.00	300.00	310.00 312.72
DESIGN LEVEL											22.45	22.67	22.70	22.70	22.64	22.36	22.23	22.13	22.02	21.92	21.82	21.72	21.62	21.54	21.50	21.29	21.08					
BULK LEVEL												22.42	22.20	22.20	22.40	22.11	21.98	21.88	21.77	21.67	21.57	21.47	21.37	21.29	21.24	21.03	20.83					
EXISTING LEVEL									22.14	22.36	22.54	22.64	22.65	22.58	22.45	22.30	22.08	22.02	20.36	17.60	17.60	17.60	17.60	17.60	17.60	17.60	21.18	20.56				
CUT/FILL DEPTH												-0.22	-0.45	-0.38	-0.05	-0.19	-0.10	-0.14	1.41	4.07	3.97	3.87	3.77	3.69	3.64	3.43	-0.36					

LONGITUDINAL SECTION section 1

SCALES: HORIZONTAL 1:1000 VERTICAL 1:200

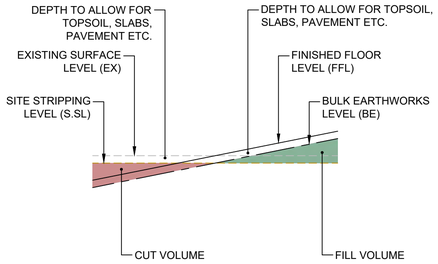


DATUM R.L. 18.00

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DESIGN LEVEL													22.18	22.40	22.40	22.40	22.26	22.17	22.07	21.97	21.87	21.76	21.66	21.40								
BULK LEVEL													21.93	21.90	21.90	22.01	22.01	21.92	21.82	21.72	21.62	21.51	21.41	21.15								
EXISTING LEVEL											21.94	21.87	22.10	22.21	22.26	22.20	22.04	21.81	21.57	21.52	21.58	21.37	21.19	21.13	20.95	20.86	20.72					
CUT/FILL DEPTH													-0.17	-0.31	-0.36	-0.19	-0.03	0.11	0.25	0.19	0.03	0.14	0.22	0.02								

LONGITUDINAL SECTION section 2

SCALES: HORIZONTAL 1:1000 VERTICAL 1:200



EARTHWORKS TYPICAL SECTION

LEGEND

——– – ——BE308.80—— – ——– BULK EARTHWORKS CONTOUR

LEVELS TABLE			
No.	FROM LEVEL (m)	TO LEVEL (m)	COLOUR
1	-1.00	-0.50	
2	-0.50	0.00	
3	0.00	1.00	
4	1.00	2.00	
5	2.00	3.00	
6	3.00	4.00	
7	4.00	5.00	
8	5.00	6.00	

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
CUT AND FILL EXCLUDING BASIN	1.000	1.000	26215.61sq.m	1780.02 Cu. M.	4406.48 Cu. M.	2626.46 Cu. M.<Fill>
CUT AND FILL OF BASIN	1.000	1.000	4179.26sq.m	14.84 Cu. M.	11720.89 Cu. M.	11706.04 Cu. M.<Fill>
Totals			30394.87sq.m	1794.86 Cu. M.	16127.37 Cu. M.	14332.51 Cu. M.<Fill>

0.0 20.0 40.0 60.0 80.0m
1:1000 A1 1:2000 A3

Rev	Description	Eng Draft	Date
B	SCHEMATIC DESIGN	JL ES	30.10.2024
A	SCHEMATIC DESIGN	JL ES	18.10.2024

Client: NSW GOVERNMENT School Infrastructure NSW

Engineer: TTW www.ttwengineers.com

Project: JORDAN SPRING HIGH SCHOOL

Drawing Title: EARTHWORKS CUT AND FILL VOLUMES PLAN

Scale at A1	Drawn	Designed	Approved
1000	ES	JL	CR

Project No	Originator	Type	Role	Sheet No.	Rev
JSHS-TTW-01-00-DR-C-03101-B					

30.10.2024 10:31 AM

Z:\jobs\24124159\civil\sheets\10\241459-TTW-10-DR-CI-03101.dwg

Appendix D Photo Log

Photographic Log

Photo 1: BH01 (0.0 – 0.5m BGL). Fill, Clayey SILT. Low plasticity clay, non-plastic, light brown, soft with coarse sized gravel, dry, gravel inclusions throughout, no staining, no observed asbestos containing material.



Photo 2: BH01 (1.6 – 3.5m BGL). Fill, Silty CLAY. Medium plasticity, brown, soft, with medium sized gravel, organic, dry, timber fragments, no odour, no staining, no observed asbestos containing material.



Photo 3: BH01 (3.8m BGL). Alluvial, Clayey to Silty SAND. Medium dense, low to medium plasticity clay, light grey, fine grained, moist, darker yellow at 4.5m BGL, no odour, no staining, no observed asbestos containing material.



Photo 4: BH02 (3.8 – 4.0m BGL). Fill, Gravelly SILT. Non-plastic, light grey, very soft, fine sized gravel, dry, no staining, no observed asbestos containing material.



Photo 5: BH04 (4.3m BGL). Fill, Clayey to silty SAND. Medium to high plasticity clay, grey, medium dense, fine grained, wet (groundwater encountered at 4.3 – 6mBGL), no odour, no staining, no observed asbestos containing material.



Photo 6: (4.8 – 6.0m BGL). Natural, Sandy to Silty CLAY. Soft, medium to high plasticity, orange, fine grained sand, organic, moist, no odour, no staining, no observed asbestos containing material.



Photo 7: BH08 (0.0 – 1.0m BGL). Fill, Clayey SILT. Non-plastic to low, brown, grey, soft, with medium to coarse sized gravel, trace fine grained sand, dry, no observed asbestos containing material



Photo 8: BH08 (2.8m BGL). Natural, Silty Clay. Soft, medium to high plasticity, brown, trace fine sized gravel, inorganic, moist to slightly moist.



Photo 9: BH08 (4.0m BGL). Natural, Silty Clay. Soft, medium to high plasticity, brown, trace fined sized gravel, inorganic, moist to slightly moist.



Photo 10: BH10 (0.0 – 1.0 BGL). Fill, Gravelly to clayey to silty SILT. Low to medium plasticity, brown to dark brown, soft to firm, medium to coarse sized gravel, trace fine to medium grained sand, slightly moist to dry.



Photo 11: BH10 (1.0 – 1.5m BGL). Fill, Silty CLAY. Low to medium plasticity, brown soft to firm, with fine to medium sized gravel, trace fine grained sand, inorganic, slightly moist to dry.



Photo 12: BH10 (3.2 – 4.5m BGL). Natural, Silty to Clayey CLAY. Firm, medium plasticity, brown trace fine sized gravel, inorganic, slightly moist to dry.



Photo 13: BH11 (0.0 – 0.5m BGL). Fill, Clayey SILT. Non-plastic to low, grey light brown, soft, with medium to coarse sized gravel, dry.



Photo 14: BH11 (1.8 – 2.0m BGL). Fill, Silty CLAY. Low plasticity, brown, very soft to soft, with fine to coarse sized gravel, trace fine grained sand, organic, slightly moist.



Photo 15: BH11 (5.0 – 6.0m BGL). Natural, Silty CLAY. Soft, medium to high plasticity, brown, with medium to coarse sized gravel, trace fine to medium grained sand, inorganic, wet.



Photo 16: BH12 (0.0 – 0.5m BGL). Fill, Clayey, SILT. Non-plastic to low, grey, light brown, soft, trace fine to medium sized gravel, dry.



Photo 17: BH12 (2.0 – 3.2m BGL). Fill, Silty CLAY. Non-plastic to low, grey, brown, very soft to soft, trace medium sized gravel, organic, slightly moist.



Photo 18: BH12 (4.8m BGL). Natural, Silty CLAY. Soft to firm, medium to high plasticity, mustard-yellow brown, trace fine sized gravel, inorganic, slightly moist.



Photo 19: Facing north towards TP01, located within the southeastern portion of the site.



Photo 20: Image of the soil profile observed at TP01. Fill was recorded from 0.0 to 3.6 mBGL (End of hole – limit of recording), ranging from Sandy GRAVEL to Gravelly CLAY.



Photo 21: TP02 located towards the southern portion of the site. The observed soil profile includes a Gravelly, clayey SILT fill layer, overlying more clay dominated fill materials.



Photo 22: TP03 located along the southern perimeter of the site. Visual features of the observed soil profile are similar to the profile encountered at TP01.



Photo 23: TP07 located within the central-west region of the site. Various large boulders and coarse gravels were encountered throughout the fill material.



Photo 24: TP10 located towards the north-eastern portion of the site. Fill material was observed to range from a red-brown silty CLAY sequence, underlying a Gravelly, sandy SILT layer. Similarly to TP07, and many other test pits located within the northern portion of the site, large gravels and boulders were observed.



Photo 25: TP12 located within the central-east portion of the site. Groundwater intrusion was encountered beyond 3.0 mBGL.



Appendix E Results Table

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				CRC Care TPH Fractions							BTEX								MAH					
				C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene (VOC)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			10	50	100	100	50	10	50	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m					120	300	2,800		180		50	85	70			105								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP01_3.5-3.6		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP04_0-0.1		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP06_0.5-0.6		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP07_0-0.1		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP07_3.4-3.5		09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	16	<50	<100	<100	<50	16	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP10_2.7-2.8		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH01_0.5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH01_1.8		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH03_4		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	-	-	-	-	-	-	-	<0.2	<0.5	<0.5	<0.5	<0.5	-	-	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH04_5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH05_2		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				CRC Care TPH Fractions							BTEX								MAH					
				C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene (VOC)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				10	50	100	100	50	10	50	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
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NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m					120	300	2,800		180		50	85	70			105								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH08_2.5		11 Oct 2024	22	<50	<100	<100	<50	22	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH11_3.5		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	<0.5	-	-	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	<0.5	-	-	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	<0.5	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	<20	<50	<100	<100	<100	<20	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	<0.5	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	QC101	BH01_0.5	10 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-
305001663	QA102	BH05_0.5	10 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-
305001663	QC102	BH05_0.5	10 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	<10	<50	<100	<100	<50	<10	<50	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				CRC Care TPH Fractions							BTEX								MAH					
				C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene (VOC)	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				10	50	100	100	50	10	50	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m					120	300	2,800		180		50	85	70			105								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	<25	<50	<100	<100	<50	<25	<50	<0.2	<0.5	<1	<2	<1	<1	-	<1	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

					Metals							pH			Asbestos							
					sec-butylbenzene	Styrene	tert-butylbenzene	Antimony	Arsenic	Cadmium	Chromium (III+VI)	Copper	Nickel	Zinc	pH (Fox)	pH (F)	Reaction Rate_	Asbestos Detected (D) / not Detected (ND)	Reported result	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Unit	pH Unit	Reaction Unit	Comment	%w/w	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR		0.5	0.5	0.5	5	2	0.4	1	1	1	1	0.1	0.1	1			0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Recreational C									300	90		17,000	1,200	30,000										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m									100		570	150	70	370						170				
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m											620	85	140	220										
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m											600	190	130	440										
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m											500	220	200	550										
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m											490	110	40	310										
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024		-	-	-	-	<5	<1	8	15	5	22	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP01_3.5-3.6		09 Oct 2024		-	-	-	-	5	<1	8	25	13	58	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP02_0-0.1		09 Oct 2024		-	-	-	-	8	<1	18	23	11	45	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP02_3.5-3.6		09 Oct 2024		-	-	-	-	<5	<1	20	10	4	18	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP03_0.7-0.8		09 Oct 2024		-	-	-	-	<5	<1	6	20	6	29	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP03_1.9-2.0		09 Oct 2024		-	-	-	-	7	<1	11	28	13	72	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP04_0-0.1		09 Oct 2024		-	-	-	-	10	<1	21	17	9	34	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP04_3.4-3.5		09 Oct 2024		-	-	-	-	8	<1	7	38	20	91	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP05_0.9-1.0		09 Oct 2024		-	-	-	-	9	<1	17	40	30	64	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP05_2.4-2.5		09 Oct 2024		-	-	-	-	12	<1	16	32	14	61	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP06_0.5-0.6		09 Oct 2024		-	-	-	-	7	<1	15	32	16	64	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP06_3.4-3.5		09 Oct 2024		-	-	-	-	<5	<1	9	21	3	24	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP07_0-0.1		09 Oct 2024		-	-	-	-	9	<1	21	16	10	34	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP07_2.9-3.0		09 Oct 2024		-	-	-	-	8	<1	31	22	14	46	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP07_3.4-3.5		09 Oct 2024		-	-	-	-	8	<1	12	17	20	70	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP08_0.5-0.6		10 Oct 2024		-	-	-	-	<5	<1	7	38	4	77	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP08_3.0-3.1		10 Oct 2024		-	-	-	-	6	<1	21	25	19	46	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP09_1.4-1.5		10 Oct 2024		-	-	-	-	<5	<1	8	42	30	116	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP09_3.5-3.6		10 Oct 2024		-	-	-	-	<5	<1	16	20	24	45	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	1.8	<0.5
305001663	TP10_2.7-2.8		10 Oct 2024		-	-	-	-	<5	<1	10	15	10	23	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP11_0-0.1		10 Oct 2024		-	-	-	-	<5	<1	9	17	9	39	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP11_2.2-2.3		10 Oct 2024		-	-	-	-	5	<1	16	17	7	19	5	7.6	2	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP11_2.6-2.7		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	7.5	7.2	4	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024		-	-	-	-	<5	<1	7	39	8	76	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	TP12_3.1-3.2		10 Oct 2024		<0.5	<0.5	<0.5	-	6	<1	14	23	16	71	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH01_0.5		10 Oct 2024		-	-	-	-	6	<1	24	26	17	89	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH01_1.8		10 Oct 2024		-	-	-	-	9	<1	17	26	16	60	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH01_3.8		10 Oct 2024		-	-	-	-	13	<1	12	29	22	101	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH01_4.3		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	4.4	6.3	2	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	4.4	6.4	3	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	4.4	6.6	3	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	4.4	6.1	2	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	7	6.1	4	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	5.2	5.9	2	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024		-	-	-	-	<5	<1	21	8	6	20	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH02_4		10 Oct 2024		-	-	-	-	8	<1	5	31	16	61	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH02_4.7		10 Oct 2024		-	-	-	-	5	<1	11	19	12	30	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH03_0.1		10 Oct 2024		-	-	-	-	7	<1	16	27	12	45	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH03_4		10 Oct 2024		-	-	-	-	7	<1	28	17	12	37	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH03_4.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	3.5	4.8	2	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	3.8	4.9	2	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	4.1	4.7	2	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024		<0.5	<0.5	<0.5	-	-	-	-	-	-	-	4.8	4.9	2	-	-	-	-	-	-	-	-
305001663	BH03_6.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	6.7	5.3	2	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	6.9	5.1	4	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	6.8	5.3	4	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024		-	-	-	-	7	<1	13	23	13	53	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH04_5		10 Oct 2024		<0.5	<0.5	<0.5	-	6	<1	17	13	7	20	4.7	7.1	2	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH04_5.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	5	6.9	2	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024		-	-	-	-	10	<1	14	28	13	61	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH05_2		10 Oct 2024		-	-	-	-	8	<1	14	37	24	104	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH05_4.3		10 Oct 2024		<0.5	<0.5	<0.5	-	6	<1	21	19	12	59	8.8	9.5	4	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH05_4.5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	9.2	9.2	4	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024		-	-	-	-	-	-	-	-	-	-	7.2	8.2	4	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

								Metals							pH			Asbestos						
				sec-butylbenzene	Styrene	tert-butylbenzene	Antimony	Arsenic	Cadmium	Chromium (III+VI)	Copper	Nickel	Zinc	pH (Fox)	pH (F)	Reaction Rate_	Asbestos Detected (D) / not Detected (ND)	Reported result	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Unit	pH Unit	Reaction Unit	Comment	%w/w	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	0.5	0.5	5	2	0.4	1	1	1	1	0.1	0.1	1			0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Recreational C								300	90		17,000	1,200	30,000											
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m								100		570	150	70	370						170					
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m										620	85	140	220											
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m										600	190	130	440											
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m										500	220	200	550											
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m										490	110	40	310											
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.6	8.1	4	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	6.4	9.2	2	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	6	<1	8	39	23	122	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	8	<1	15	32	17	72	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	6	<1	12	25	15	51	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH07_5		10 Oct 2024	<0.5	<0.5	<0.5	-	6	<1	11	14	8	25	7.6	8.3	4	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.4	7.9	4	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.9	8.1	4	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	-	-	-	-	9	<1	19	20	15	61	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	<5	<1	8	38	23	92	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.2	6.9	4	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.6	6.7	4	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.5	7	4	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.3	7.9	4	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.2	7.8	4	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.6	8.2	4	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-	8	<1	12	31	18	88	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH09_3.8		10 Oct 2024	<0.5	<0.5	<0.5	-	6	<1	21	18	11	27	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.8	8.2	4	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.9	8.8	4	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.9	8.4	4	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	8.8	8.6	4	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	-	-	-	-	6	<1	13	26	20	83	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.4	6.2	4	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	7.2	7.6	4	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	-	-	-	-	8	<1	20	25	16	55	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	7	<1	16	19	16	57	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	<5	<1	10	22	14	61	-	-	-	ND	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH12_3.0		11 Oct 2024	<0.5	<0.5	<0.5	-	13	<1	11	35	19	70	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	4.3	6.8	2	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	3.1	6	2	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	<5	<1	14	17	7	19	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH202_1		10 Oct 2024	-	-	-	-	7	<1	13	32	11	50	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	4.6	7.1	2	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	3.4	5.2	2	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	4.7	5.5	2	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	-	-	-	-	7.2	<0.4	12	21	12	51	-	-	-	ND	<0.001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	6	<1	10	30	16	87	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	5.1	5.8	2	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	4.4	5.8	2	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	5.2	6.4	2	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	-	-	-	-	3.6	<0.4	6.6	17	8.6	37	-	-	-	ND	<0.001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	8.2	<0.4	11	30	25	94	-	-	-	ND	<0.001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	6.1	<0.4	29	22	19	59	-	-	-	ND	<0.001	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	8	<1	12	22	11	47	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	7	<0.4	8	26	11	62	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	7	<1	18	15	8	29	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	9	<0.4	17	14	7	26	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	7	<1	15	16	8	30	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	7	<0.4	15	16	10	32	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
305001663	QA101	BH01_0.5	10 Oct 2024	-	-	-	-	6	<1	16	34	22	86	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QC101	BH01_0.5	10 Oct 2024	-	-	-	-	8	<0.4	36	33	20	81	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
305001663	QA102	BH05_0.5	10 Oct 2024	-	-	-	-	6	<1	12	25	14	64	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
305001663	QC102	BH05_0.5	10 Oct 2024	-	-	-	-	7	<0.4	12	24	14	58	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	7	<0.4	12	26	15	62	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	8	<1	8	40	19	87	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

										Metals							pH			Asbestos						
						sec-butylbenzene	Styrene	tert-butylbenzene	Antimony	Arsenic	Cadmium	Chromium (III+VI)	Copper	Nickel	Zinc	pH (Fox)	pH (F)	Reaction Rate_	Asbestos Detected (D) / not Detected (ND)	Reported result	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Unit	pH Unit	Reaction Unit	Comment	%w/w	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR			0.5	0.5	0.5	5	2	0.4	1	1	1	1	0.1	0.1	1			0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 HIL, Recreational C										300	90		17,000	1,200	30,000										
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																									
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																									
>=0m, <1m																									
>=1m, <2m																									
>=2m, <4m																									
>=4m																									
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m										100		570	150	70	370						170				
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m												620	85	140	220										
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m												600	190	130	440										
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m												500	220	200	550										
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m												490	110	40	310										
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																									
PFAS NEMP 2018 Table 2 Health Public open space																									
PFAS NEMP 2018 Table 3 Interim EDE Public open space																									
305001663	QC400	TP11_0-0.1	10 Oct 2024			-	-	-	-	7	<0.4	9	32	21	110	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				PAH																				
				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	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)	Organochlorine pesticides lWRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			0.1	0.1	0.1	0.1	0.5	0.5	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.1	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Recreational C														3	3	3	300					10		70
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m										0.7														
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP01_3.5-3.6		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP03_0.7-0.8		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP04_0-0.1		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP04_3.4-3.5		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP05_0.9-1.0		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP06_0.5-0.6		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP07_0-0.1		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP07_3.4-3.5		09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	0.6	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	1.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP09_1.4-1.5		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	2.5	2.4	0.7	0.7	<0.5	0.8	0.7	<0.5	<0.5	0.6	0.9	1.2	1.5	10.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP10_2.7-2.8		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	TP11_2.2-2.3		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH01_0.5		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH01_1.8		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH03_4		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH04_5		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH05_2		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				PAH																				
				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	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)	Organochlorine pesticides IWRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.5	0.5	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.1	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Recreational C														3	3	3	300					10		70
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m										0.7														
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH08_2.5		11 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH09_3.8		10 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH11_3.5		11 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	<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	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
305001663	BH203_1.0		11 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	<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	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1
305001663	BH204_0.2		02 Oct 2024	<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	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	<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	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	<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	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	QC101	BH01_0.5	10 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
305001663	QA102	BH05_0.5	10 Oct 2024	<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	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
305001663	QC102	BH05_0.5	10 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	<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	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				PAH																				
				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	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)	Organochlorine pesticides IWRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.5	0.5	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.1	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HIL, Recreational C														3	3	3	300					10		70
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m										0.7														
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	<0.1	<0.1	<0.1	<0.1	-	-	<0.05	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
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				Organochlorine Pesticides																				
				Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Azinophos methyl
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR	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	0.05	0.05	0.05	0.5	0.05
NEPM 2013 HIL, Recreational C									400		340				20				10		10	400	30	
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m								180																
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	**TP01_3.0-3.1**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP01_3.5-3.6**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP02_0-0.1**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP02_3.5-3.6**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP03_0.7-0.8**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP03_1.9-2.0**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP04_0-0.1**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP04_3.4-3.5**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP05_0.9-1.0**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP05_2.4-2.5**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP06_0.5-0.6**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP06_3.4-3.5**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP07_0-0.1**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP07_2.9-3.0**		**09 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP07_3.4-3.5**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP08_0.5-0.6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP08_3.0-3.1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP09_1.4-1.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP09_3.5-3.6**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP10_2.7-2.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP11_0-0.1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**TP11_2.2-2.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP11_2.6-2.7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP12_1.0-1.1**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP12_3.1-3.2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_0.5**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH01_1.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_3.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_4.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_6.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_4**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_4.7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_0.1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH03_4**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH03_4.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_6.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_7.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH04_0.1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH04_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH04_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_0.5**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH05_2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_4.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_4.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Organochlorine Pesticides																			
				Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Azinophos methyl
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				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	0.05	0.05	0.05	0.5	0.05
NEPM 2013 HIL, Recreational C									400		340				20				10		10	400	30	
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m								180																
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	**BH05_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH06_2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH07_0.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH07_1.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH07_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH07_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH07_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_0.1**		**11 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH08_2.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_3.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_4.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_4.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_5.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_5.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH08_6.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH09_0.1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH09_3.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH09_4.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH09_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH09_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH09_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH10_0.1**		**11 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH10_4.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH10_4.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH11_2.5**		**11 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH11_3.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH12_0.1**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH12_3.0**		**11 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH12_5.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH12_5.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH12_6.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH202_1**		**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**BH202_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH202_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH202_8.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH203_0.5**		**02 Oct 2024**	-	-	<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	<0.2
305001663	**BH203_1.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH203_7.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH203_8.5**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH203_10.0**		**11 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH204_0.1**		**02 Oct 2024**	-	-	<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	<0.2
305001663	**BH204_0.2**		**02 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH204_2.5**		**02 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QA100**	**TP01_3.5-3.6**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QC100**	**TP01_3.5-3.6**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QA200**	**TP04_0-0.1**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QC200**	**TP04_0-0.1**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QA300**	**TP07_0-0.1**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QC300**	**TP07_0-0.1**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QA101**	**BH01_0.5**	**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**QC101**	**BH01_0.5**	**10 Oct 2024**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
305001663	**QA102**	**BH05_0.5**	**10 Oct 2024**	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-	<0.05
305001663	**QC102**	**BH05_0.5**	**10 Oct 2024**	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
305001663	**QC102 - [TRIPLICATE]**	**BH05_0.5**	**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**QA400**	**TP11_0-0.1**	**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Organochlorine Pesticides																			
				Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Azinophos methyl
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				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	0.05	0.05	0.05	0.5	0.05
NEPM 2013 HIL, Recreational C									400		340				20				10		10	400	30	
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m								180																
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Organophosphorous Pesticides																			
				Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methidathion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			0.2	0.05	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	0.05	0.2	0.1
NEPM 2013 HIL, Recreational C								250																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP01_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP04_0-0.1		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP06_0.5-0.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP07_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP07_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP10_2.7-2.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_0.5		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH01_1.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH03_4		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH04_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH05_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Organophosphorous Pesticides																			
				Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methidathion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.2	0.05	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	0.05	0.2	0.1
NEPM 2013 HIL, Recreational C								250															
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																							
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH09_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	<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	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	<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	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	QC101	BH01_0.5	10 Oct 2024	-	<0.1	-	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1
305001663	QA102	BH05_0.5	10 Oct 2024	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	<0.05	<0.05	<0.05	-	<0.05	-	-	-	<0.05	<0.05	-	-
305001663	QC102	BH05_0.5	10 Oct 2024	-	<0.1	-	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	-	<0.1
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Organophosphorous Pesticides																				
				Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methidathion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.2	0.05	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	0.05	0.2	0.1
NEPM 2013 HIL, Recreational C								250																
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	**QC400**	**TP11_0-0.1**	**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

														Insecticides	Pesticides								
				Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Prothiofos	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Tokuthion	Demeton-S-methyl	Fenamiphos	Mirex	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		LOR		0.1	0.1	0.2	0.2	2	0.1	0.05	0.2	0.1	0.2	0.2	0.2	0.2	0.05	0.05	0.1	0.1	0.2	0.05	0.1	0.1
NEPM 2013 HIL, Recreational C																			20					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP01_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP04_0-0.1		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP06_0.5-0.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP07_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP07_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP10_2.7-2.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_0.5		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH01_1.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH03_4		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH04_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH05_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

														Insecticides	Pesticides									
				Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Prothiofos	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Tokuthion	Demeton-S-methyl	Fenamiphos	Mirex	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		LOR		0.1	0.1	0.2	0.2	2	0.1	0.05	0.2	0.1	0.2	0.2	0.2	0.2	0.05	0.05	0.1	0.1	0.2	0.05	0.1	0.1
NEPM 2013 HIL, Recreational C																			20					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH09_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	<0.2	<0.2	<2	<0.2	<2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.2	<0.2	-	<0.1	<0.1
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	<0.2	<0.2	<2	<0.2	<2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.2	<0.2	-	<0.1	<0.1
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	QC101	BH01_0.5	10 Oct 2024	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1
305001663	QA102	BH05_0.5	10 Oct 2024	<0.2	-	<0.2	-	-	-	<0.05	-	-	-	-	-	-	<0.05	<0.05	-	<0.2	-	<0.05	-	-
305001663	QC102	BH05_0.5	10 Oct 2024	<0.1	<0.1	-	-	-	<0.1	-	-	<0.1	-	-	-	-	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

														Insecticides	Pesticides									
				Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Prothiofos	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Tokuthion	Demeton-S-methyl	Fenamiphos	Mirex	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Arochlor 1016	Arochlor 1221
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR	0.1	0.1	0.2	0.2	2	0.1	0.05	0.2	0.1	0.2	0.2	0.2	0.2	0.05	0.05	0.1	0.1	0.2	0.05	0.1	0.1
NEPM 2013 HIL, Recreational C																			20					
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Polychlorinated Biphenyls						SVOCs	VOCs												
				Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	EPN	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.1	0.1	0.2	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
NEPM 2013 HIL, Recreational C									1														
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																							
Site ID	**Field ID**	**Location Code**	**Date**																				
305001663	TP01_3.0-3.1		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP01_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP04_0-0.1		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_0.5-0.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP10_2.7-2.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH01_0.5		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_1.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_4		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_5		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Polychlorinated Biphenyls						SVOCs	VOCs												
				Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	EPN	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.1	0.1	0.2	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
NEPM 2013 HIL, Recreational C									1														
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																							
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	-	-	-	-	-	-	-	<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
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	-	-	-	-	-	<0.1	-	<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
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC101	BH01_0.5	10 Oct 2024	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA102	BH05_0.5	10 Oct 2024	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC102	BH05_0.5	10 Oct 2024	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Polychlorinated Biphenyls						SVOCs	VOCs												
				Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	EPN	cis-1,4-Dichloro-2-butene	Pentachloroethane	trans-1,4-Dichloro-2-butene	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dichloroethane	1,2-dichloropropane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.1	0.1	0.1	0.1	0.1	0.1	0.2	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
NEPM 2013 HIL, Recreational C									1														
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																							
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Chlorinated Hydrocarbons																			
				1,3-dichloropropane	2,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dibromoethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			0.5	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	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP01_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP04_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_0.5-0.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP10_2.7-2.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	<0.5	<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	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH01_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_1.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	<0.5	<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	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_5		10 Oct 2024	<0.5	<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	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	<0.5	<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	<0.5	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Chlorinated Hydrocarbons																				
				1,3-dichloropropane	2,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dibromoethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	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	0.5	0.5	0.5	5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5		10 Oct 2024	<0.5	<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	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	<0.5	<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	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	<0.5	<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	<0.5	<0.5	<5	<0.5	<0.5	<0.5
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC101	BH01_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA102	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC102	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Chlorinated Hydrocarbons																			
				1,3-dichloropropane	2,2-dichloropropane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Hexachlorobutadiene	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	1,2,3-trichlorobenzene	1,2,4-trichlorobenzene	1,2-dibromoethane
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR	0.5	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	0.5	0.5	5	0.5	0.5	0.5
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Halogenated Hydrocarbons											Solvents									
				1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Carbon disulfide	Vinyl acetate	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)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	5	0.5	5	5	5	5	0.5	5	0.0005	0.0005	0.0005	0.0005	0.0001
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	TP01_3.0-3.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	TP01_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP02_3.5-3.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_0.7-0.8		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP03_1.9-2.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	TP04_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP04_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_0.9-1.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP05_2.4-2.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	TP06_0.5-0.6		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP06_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_0-0.1		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP07_2.9-3.0		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	TP07_3.4-3.5		09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_0.5-0.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP08_3.0-3.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_1.4-1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP09_3.5-3.6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	TP10_2.7-2.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_0-0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.2-2.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP11_2.6-2.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_1.0-1.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	TP12_3.1-3.2		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH01_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH01_1.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_4.3		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH01_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH02_4.7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_4		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH03_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_6		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	-	-	-	-	-
305001663	BH03_6.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH03_7.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH04_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH04_5		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH04_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH05_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_4.3		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	-	-	-	-	-
305001663	BH05_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Halogenated Hydrocarbons											Solvents									
				1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Carbon disulfide	Vinyl acetate	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)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	5	0.5	5	5	5	5	0.5	5	0.0005	0.0005	0.0005	0.0005	0.0001
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH07_5		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	-	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	-	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<0.5	<5	<0.5	<5	<5	<5	<5	<0.5	<5	-	-	-	-	-
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.005	<0.001	<0.0001
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	QC101	BH01_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.005	<0.001	<0.0001
305001663	QA102	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002
305001663	QC102	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.005	<0.001	<0.0001
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Halogenated Hydrocarbons											Solvents									
				1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chlorotoluene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	Methyl Ethyl Ketone	2-hexanone (MBK)	4-Methyl-2-pentanone	Carbon disulfide	Vinyl acetate	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)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	5	0.5	5	5	5	5	0.5	5	0.0005	0.0005	0.0005	0.0005	0.0001
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																								
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Perfluorocarbons																			
				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
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	LOR			0.0002	0.0002	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001
NEPM 2013 HIL, Recreational C																								
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																								
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																								
>=0m, <1m																								
>=1m, <2m																								
>=2m, <4m																								
>=4m																								
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																								
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																								
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NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																								
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																								
PFAS NEMP 2018 Table 2 Health Public open space																								
PFAS NEMP 2018 Table 3 Interim EDE Public open space																					1			
Site ID	**Field ID**	**Location Code**	**Date**																					
305001663	**TP01_3.0-3.1**		**09 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**TP01_3.5-3.6**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP02_0-0.1**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP02_3.5-3.6**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP03_0.7-0.8**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP03_1.9-2.0**		**09 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**TP04_0-0.1**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP04_3.4-3.5**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP05_0.9-1.0**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP05_2.4-2.5**		**09 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**TP06_0.5-0.6**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP06_3.4-3.5**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP07_0-0.1**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP07_2.9-3.0**		**09 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**TP07_3.4-3.5**		**09 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP08_0.5-0.6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP08_3.0-3.1**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP09_1.4-1.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP09_3.5-3.6**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**TP10_2.7-2.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP11_0-0.1**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP11_2.2-2.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP11_2.6-2.7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP12_1.0-1.1**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**TP12_3.1-3.2**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH01_0.5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH01_1.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_3.8**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_4.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_6.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH01_7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_4**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH02_4.7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_0.1**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_4**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH03_4.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_6**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_6.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_7**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH03_7.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH04_0.1**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH04_5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH04_5.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_0.5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	**BH05_2**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_4.3**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_4.5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	**BH05_5**		**10 Oct 2024**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Perfluorocarbons																			
				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
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0002	0.0002	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001
NEPM 2013 HIL, Recreational C																							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																					1		
305001663	BH05_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	BH07_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	BH08_2.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	BH10_4.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	BH11_3.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	<0.0005	<0.0005	<0.0001	<0.001	<0.005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	QC101	BH01_0.5	10 Oct 2024	<0.0005	<0.0005	<0.0001	<0.001	<0.005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0002	0.0001
305001663	QA102	BH05_0.5	10 Oct 2024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0005	<0.0005	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
305001663	QC102	BH05_0.5	10 Oct 2024	<0.0005	<0.0005	<0.0001	<0.001	<0.005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 1: Soil Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

Stantec

				Perfluorocarbons																			
				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
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
			LOR	0.0002	0.0002	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001
NEPM 2013 HIL, Recreational C																							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs																							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand																							
>=0m, <1m																							
>=1m, <2m																							
>=2m, <4m																							
>=4m																							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m																							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m																							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m																							
PFAS NEMP 2018 Table 2 Health Public open space																							
PFAS NEMP 2018 Table 3 Interim EDE Public open space																					1		
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
				mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0002	0.0001	0.0001	0.0001
NEPM 2013 HIL, Recreational C							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand							
>=0m, <1m							
>=1m, <2m							
>=2m, <4m							
>=4m							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m							
PFAS NEMP 2018 Table 2 Health Public open space					1		10
PFAS NEMP 2018 Table 3 Interim EDE Public open space							10
Site ID	**Field ID**	**Location Code**	**Date**				
305001663	**TP01_3.0-3.1**		**09 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**TP01_3.5-3.6**		**09 Oct 2024**	-	-	-	-
305001663	**TP02_0-0.1**		**09 Oct 2024**	-	-	-	-
305001663	**TP02_3.5-3.6**		**09 Oct 2024**	-	-	-	-
305001663	**TP03_0.7-0.8**		**09 Oct 2024**	-	-	-	-
305001663	**TP03_1.9-2.0**		**09 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**TP04_0-0.1**		**09 Oct 2024**	-	-	-	-
305001663	**TP04_3.4-3.5**		**09 Oct 2024**	-	-	-	-
305001663	**TP05_0.9-1.0**		**09 Oct 2024**	-	-	-	-
305001663	**TP05_2.4-2.5**		**09 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**TP06_0.5-0.6**		**09 Oct 2024**	-	-	-	-
305001663	**TP06_3.4-3.5**		**09 Oct 2024**	-	-	-	-
305001663	**TP07_0-0.1**		**09 Oct 2024**	-	-	-	-
305001663	**TP07_2.9-3.0**		**09 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**TP07_3.4-3.5**		**09 Oct 2024**	-	-	-	-
305001663	**TP08_0.5-0.6**		**10 Oct 2024**	-	-	-	-
305001663	**TP08_3.0-3.1**		**10 Oct 2024**	-	-	-	-
305001663	**TP09_1.4-1.5**		**10 Oct 2024**	-	-	-	-
305001663	**TP09_3.5-3.6**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**TP10_2.7-2.8**		**10 Oct 2024**	-	-	-	-
305001663	**TP11_0-0.1**		**10 Oct 2024**	-	-	-	-
305001663	**TP11_2.2-2.3**		**10 Oct 2024**	-	-	-	-
305001663	**TP11_2.6-2.7**		**10 Oct 2024**	-	-	-	-
305001663	**TP12_1.0-1.1**		**10 Oct 2024**	-	-	-	-
305001663	**TP12_3.1-3.2**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH01_0.5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH01_1.8**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_3.8**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_4.3**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_5**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_5.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_6**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_6.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH01_7**		**10 Oct 2024**	-	-	-	-
305001663	**BH02_2**		**10 Oct 2024**	-	-	-	-
305001663	**BH02_4**		**10 Oct 2024**	-	-	-	-
305001663	**BH02_4.7**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_0.1**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_4**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH03_4.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_5**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_5.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_6**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_6.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_7**		**10 Oct 2024**	-	-	-	-
305001663	**BH03_7.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH04_0.1**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH04_5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH04_5.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH05_0.5**		**10 Oct 2024**	<0.0002	<0.0002	<0.0005	<0.0002
305001663	**BH05_2**		**10 Oct 2024**	-	-	-	-
305001663	**BH05_4.3**		**10 Oct 2024**	-	-	-	-
305001663	**BH05_4.5**		**10 Oct 2024**	-	-	-	-
305001663	**BH05_5**		**10 Oct 2024**	-	-	-	-

				Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
				mg/kg	mg/kg	mg/kg	mg/kg
			LOR	0.0002	0.0001	0.0001	0.0001
NEPM 2013 HIL, Recreational C							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand							
>=0m, <1m							
>=1m, <2m							
>=2m, <4m							
>=4m							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m							
PFAS NEMP 2018 Table 2 Health Public open space					1		10
PFAS NEMP 2018 Table 3 Interim EDE Public open space							10
305001663	BH05_5.5		10 Oct 2024	-	-	-	-
305001663	BH05_6		10 Oct 2024	-	-	-	-
305001663	BH06_2		10 Oct 2024	-	-	-	-
305001663	BH07_0.5		10 Oct 2024	-	-	-	-
305001663	BH07_1.5		10 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	BH07_5		10 Oct 2024	-	-	-	-
305001663	BH07_5.5		10 Oct 2024	-	-	-	-
305001663	BH07_6		10 Oct 2024	-	-	-	-
305001663	BH08_0.1		11 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	BH08_2.5		11 Oct 2024	-	-	-	-
305001663	BH08_3.5		11 Oct 2024	-	-	-	-
305001663	BH08_4.0		11 Oct 2024	-	-	-	-
305001663	BH08_4.5		11 Oct 2024	-	-	-	-
305001663	BH08_5.0		11 Oct 2024	-	-	-	-
305001663	BH08_5.5		11 Oct 2024	-	-	-	-
305001663	BH08_6.0		11 Oct 2024	-	-	-	-
305001663	BH09_0.1		10 Oct 2024	-	-	-	-
305001663	BH09_3.8		10 Oct 2024	-	-	-	-
305001663	BH09_4.5		10 Oct 2024	-	-	-	-
305001663	BH09_5		10 Oct 2024	-	-	-	-
305001663	BH09_5.5		10 Oct 2024	-	-	-	-
305001663	BH09_6		10 Oct 2024	-	-	-	-
305001663	BH10_0.1		11 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	BH10_4.0		11 Oct 2024	-	-	-	-
305001663	BH10_4.5		11 Oct 2024	-	-	-	-
305001663	BH11_2.5		11 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	BH11_3.5		11 Oct 2024	-	-	-	-
305001663	BH12_0.1		11 Oct 2024	-	-	-	-
305001663	BH12_3.0		11 Oct 2024	-	-	-	-
305001663	BH12_5.0		11 Oct 2024	-	-	-	-
305001663	BH12_5.5		11 Oct 2024	-	-	-	-
305001663	BH12_6.0		11 Oct 2024	-	-	-	-
305001663	BH202_1		10 Oct 2024	-	-	-	-
305001663	BH202_5		10 Oct 2024	-	-	-	-
305001663	BH202_6		10 Oct 2024	-	-	-	-
305001663	BH202_8.5		10 Oct 2024	-	-	-	-
305001663	BH203_0.5		02 Oct 2024	-	-	-	-
305001663	BH203_1.0		11 Oct 2024	-	-	-	-
305001663	BH203_7.0		11 Oct 2024	-	-	-	-
305001663	BH203_8.5		11 Oct 2024	-	-	-	-
305001663	BH203_10.0		11 Oct 2024	-	-	-	-
305001663	BH204_0.1		02 Oct 2024	-	-	-	-
305001663	BH204_0.2		02 Oct 2024	-	-	-	-
305001663	BH204_2.5		02 Oct 2024	-	-	-	-
305001663	QA100	TP01_3.5-3.6	09 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	QC100	TP01_3.5-3.6	09 Oct 2024	<0.0002	<0.0001	<0.0001	<0.0001
305001663	QA200	TP04_0-0.1	09 Oct 2024	-	-	-	-
305001663	QC200	TP04_0-0.1	09 Oct 2024	-	-	-	-
305001663	QA300	TP07_0-0.1	09 Oct 2024	-	-	-	-
305001663	QC300	TP07_0-0.1	09 Oct 2024	-	-	-	-
305001663	QA101	BH01_0.5	10 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	QC101	BH01_0.5	10 Oct 2024	<0.0002	0.0001	<0.0001	<0.0001
305001663	QA102	BH05_0.5	10 Oct 2024	<0.0002	<0.0002	<0.0005	<0.0002
305001663	QC102	BH05_0.5	10 Oct 2024	<0.0002	<0.0001	<0.0001	<0.0001
305001663	QC102 - [TRIPLICATE]	BH05_0.5	10 Oct 2024	-	-	-	-
305001663	QA400	TP11_0-0.1	09 Oct 2024	-	-	-	-

				Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)
				mg/kg	mg/kg	mg/kg	mg/kg
LOR				0.0002	0.0001	0.0001	0.0001
NEPM 2013 HIL, Recreational C							
NEPM 2013 Sch B1 Table 7 Asbestos HSLs							
NEPM 2013 Soil HSL Recreational C, for Vapour Intrusion, Sand							
>=0m, <1m							
>=1m, <2m							
>=2m, <4m							
>=4m							
NEPM 2013 EIL UR/POS, site specific (Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clayey silt) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Gravelly Clay) >=0m, <2m							
NEPM 2013 EIL UR/POS, site specific (Silty Gravelly Sand) >=0m, <2m							
NEPM 2013 ESL UR/POS, Coarse Soil >=0m, <2m							
PFAS NEMP 2018 Table 2 Health Public open space					1		10
PFAS NEMP 2018 Table 3 Interim EDE Public open space							10
305001663	QC400	TP11_0-0.1	10 Oct 2024	-	-	-	-

Stantec

Table 2: Sediment Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

			PAH			Metals										Inorganics	Organochlorine Pesticides					Polychlorinated Biphenyls
			Benzo(a)pyrene TEQ (half LOR)_	Benzo(a)pyrene TEQ (upper bound) *	PAHs (Sum of total)	Antimony	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Silver	Zinc	Moisture Content	Chlordane	DDD	Dieldrin	Endrin	PCBs (Sum of total)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR			0.5	0.5	0.5	5	5	1	2	5	5	0.1	2	2	5	1	0.05	0.05	0.05	0.05	0.1
ANZG (2018) Sediment Quality Guidelines (DGV)					10	2	20	1.5	80	65	50	0.15	21	1	200		0.0045	0.0014	0.0028	0.0027	0.034
ANZG (2018) Sediment Quality Guidelines (GV-high)					50	25	70	10	370	270	220	1	52	4	410		0.009	0.007	0.007	0.06	0.28
Field ID	Date	Lab Report Number																			
SED01_0.1	08 Oct 2024	ES2432838	0.6	1.2	<0.5	<5	<5	<1	8	<5	8	<0.1	4	<2	15	21.5	<0.05	<0.05	<0.05	<0.05	<0.1
SED03_0.1	08 Oct 2024	ES2432838	0.6	1.2	<0.5		<5	<1	9	<5	7	<0.1	5		15	16.7	<0.05	<0.05	<0.05	<0.05	<0.1
SED05_0.1	08 Oct 2024	ES2432838	0.6	1.2	<0.5		<5	<1	8	<5	8	<0.1	5		16	14.8	<0.05	<0.05	<0.05	<0.05	<0.1
SED07_0.15	08 Oct 2024	ES2432838	0.6	1.2	<0.5		<5	<1	8	10	9	<0.1	6		38	24.8	<0.05	<0.05	<0.05	<0.05	<0.1
SED09_0.1	08 Oct 2024	ES2432838	0.6	1.2	<0.5		<5	<1	8	<5	6	<0.1	4		15	16.8	<0.05	<0.05	<0.05	<0.05	<0.1

	ES_EPA8 100	NA					Other		Pesticides by LCMSMS (Positive		TPH					CRC Care TPH Fractions							BTEX							
	Total PAH (NEPM/WHO 16)	Benzo(a)pyrene TEQ (WHO)	Naphthalophos	Sum of WA DWER PFAS (n=10)*	Benzo(b,j+k)fluoranthene	Acephate	Phosalone	Triazophos	Bensulide	Demeton-O & Demeton-S	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	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene (VOC)
	µg/L	µg/L	mg/L	UG/L	µg/L	µg/L	mg/L	mg/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
LOR	0.1	0.5	0.001	0.0002	0.2	0.5	0.00005	0.000005	0.1	0.02	10	50	100	50	50	10	50	100	100	50	10	50	1	1	1	2	1	2	1	1
ANZG Freshwater Toxicant DGVs LOSP 95%																							950	180	80		350			16
ANZG Freshwater Toxicant DGVs LOSP 99%																							600	110	50		200			2.5
PFAS NEMP 2018 Table 5 Freshwater 95%																														
PFAS NEMP 2018 Table 5 Freshwater 99%																														
NHMRC Managing Risks in Recreational Water 2008 (Health)						10																	1	800	300			600		
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																							8,000 | 8,000 | 9,000							
>=2m, <4m																					10,000	10,000	8,000							
>=4m, <8m																					10,000	10,000	8,000							
>=8m																					10,000	10,000	9,000							
Buildings & Structures (AS2159-2009)																														

Site ID	Field ID	Date																												
305001663	MW01	25 Oct 2024	-	-	<0.0010	0.0296	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	MW02	25 Oct 2024	-	-	<0.0010	0.0522	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	MW03	25 Oct 2024	-	-	<0.0010	0.0166	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	MW04	25 Oct 2024	-	-	<0.0010	0.302	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	MW05	25 Oct 2024	-	-	<0.0010	0.0595	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	QA100	25 Oct 2024	-	-	<0.0010	0.222	-	<0.5	-	<0.00000	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2	<2	<2	<2	<2	<1	<5
	QC100	25 Oct 2024	<0.1	<0.5	-	-	<0.2	-	<0.00005	-	-	-	<10	<50	<100	<100	<50	<10	<50	<100	<100	<50	<10	<50	<1	<1	<1	<2	<1	-	-	<1

			Metals												Inorganics									Organic		PA													
			Arsenic (filtered)	Cadmium (filtered)	Calcium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Magnesium (filtered)	Mercury (filtered)	Nickel (filtered)	Potassium (filtered)	Sodium (filtered)	Zinc (filtered)	Alkalinity (Bicarbonate as CaCO3)	Carbonate Alkalinity (as CaCO3)	Alkalinity (Hydroxide) as CaCO3	Alkalinity (total) as CaCO3	Anions Total	Cations Total	Chloride	Ionic Balance	Sulfate as SO4 - Turbidimetric (filtered)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene
			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	meq/L	meq/L	µg/L	%	µg/L	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
LOR			1	0.1	1,000	1	1	1	1,000	0.1	1	1,000	1,000	1	1,000	1,000	1,000	1,000	0.01	0.01	1,000	0.01	1,000	0.002	0.01	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ANZG Freshwater Toxicant DGVs LOSP 95%				0.2			1.4	3.4		0.6	11			8												16					2	0.4	1.4				
ANZG Freshwater Toxicant DGVs LOSP 99%				0.06			1	1		0.06	8			2.4												2.5					0.6	0.01	1				
PFAS NEMP 2018 Table 5 Freshwater 95%																																						
PFAS NEMP 2018 Table 5 Freshwater 99%																																						
NHMRC Managing Risks in Recreational Water 2008 (Health)			70	20			20000	100		10	200																											
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																																						
>=2m, <4m																																						
>=4m, <8m																																						
>=8m																																						
Buildings & Structures (AS2159-2009)																					6,000,000																	
Site ID	Field ID	Date																																				
305001663	MW01	25 Oct 2024	<1	<0.1	11,000	<1	<1	<1	6,000	<0.1	8	5,000	48,000	25	42,000	<1,000	<1,000	42,000	2.95	3.26	69,000	4.93	8,000	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MW02	25 Oct 2024	<1	0.4	190,000	<1	100	1	643,000	<0.1	349	8,000	########	298	7,000	<1,000	<1,000	7,000	132	140	########	2.82	3,000	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MW03	25 Oct 2024	<1	<0.1	35,000	<1	2	<1	110,000	<0.1	61	3,000	########	16	482,000	<1,000	<1,000	482,000	116	116	########	0.2	142,000	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MW04	25 Oct 2024	<1	0.1	121,000	<1	4	<1	122,000	<0.1	39	7,000	839,000	133	402,000	<1,000	<1,000	402,000	53.3	52.8	########	0.55	645,000	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	MW05	25 Oct 2024	2	<0.1	73,000	<1	<1	<1	<1,000	1.1	5	64,000	438,000	<5	<1,000	108,000	234,000	342,000	24.4	24.3	519,000	0.24	143,000	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	QA100	25 Oct 2024	<1	0.2	-	<1	12	<1	-	<0.1	94	-	-	208	-	-	-	-	-	-	-	-	-	<0.0020	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	QC100	25 Oct 2024	<1	0.3	-	<1	30	<1	-	-	79	-	-	200	-	-	-	-	-	-	-	-	-	-	<0.01	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

			PAH											Organochlorine Pesticides																							
			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)	PAHs (Sum of total)	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	4,4-DDE	a-BHC	Aldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene
			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	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
LOR			0.1	0.1	0.00005	0.1	0.1	0.1	0.05	0.05	0.1	0.1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.006	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.01
ANZG Freshwater Toxicant DGVs LOSP 95%					0.0002													0.08					0.01			0.2				0.02			0.2	0.09		0.1
ANZG Freshwater Toxicant DGVs LOSP 99%					0.0001													0.03					0.006			0.03				0.01			0.07	0.01		0.05
PFAS NEMP 2018 Table 5 Freshwater 95%																																					
PFAS NEMP 2018 Table 5 Freshwater 99%																																					
NHMRC Managing Risks in Recreational Water 2008 (Health)					0.00001													1					20			30							20			
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																																					
>=2m, <4m																																					
>=4m, <8m																																					
>=8m																																					
Buildings & Structures (AS2159-2009)																																					
Site ID	**Field ID**	**Date**																																			
305001663	**MW01**	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	MW02	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	MW03	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	MW04	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	MW05	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	QA100	**25 Oct 2024**	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010
	QC100	**25 Oct 2024**	-	-	<0.0001	<0.1	<0.1	<0.1	-	-	-	-	-	<0.01	<0.05	<0.01	<0.05	-	<0.01	<0.01	<0.05	<0.01	<0.006	-	<0.01	-	<0.02	<0.02	<0.02	<0.01	-	-	<0.05	<0.01	<0.01	<0.01

			Organophosphorous Pesticides																								
			Methoxychlor	Oxychlordane	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Azinphos Ethyl	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Methidathion	Methyl parathion
			µg/L	mg/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
LOR			0.01	0.00001	0.02	0.05	0.05	0.02	0.02	0.02	0.009	0.05	0.01	0.02	0.02	0.01	0.05	0.02	0.05	0.02	0.01	0.05	0.01	0.05	0.02	0.05	0.05
ANZG Freshwater Toxicant DGVs LOSP 95%					0.02						0.01					0.01		0.15				0.2			0.05		
ANZG Freshwater Toxicant DGVs LOSP 99%					0.01						0.00004					0.00003		0.1				0.1			0.002		
PFAS NEMP 2018 Table 5 Freshwater 95%																											
PFAS NEMP 2018 Table 5 Freshwater 99%																											
NHMRC Managing Risks in Recreational Water 2008 (Health)			300		3	10	10	0.2		5	10					3	1	50	3	3	1	10	10		50	30	100
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																											
>=2m, <4m																											
>=4m, <8m																											
>=8m																											
Buildings & Structures (AS2159-2009)																											
Site ID	**Field ID**	**Date**																									
305001663	**MW01**	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	MW02	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	MW03	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	MW04	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	MW05	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	QA100	**25 Oct 2024**	<0.010	<0.00001	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	<0.1	<0.5
	QC100	**25 Oct 2024**	<0.02	-	<0.02	-	<0.05	-	-	-	<0.009	<0.05	<0.05	-	-	<0.01	<0.05	<0.1	<0.05	<0.05	-	<0.05	-	<0.05	<0.05	<0.05	<0.05

														Fungicides	Pesticides													Polychlorinated Biphenyls								
				Mevinphos (Phosdrin)	Monocrotophos	Omethoate	Phorate	Prothiofos	Pyrazophos	Ronnel	Terbufos	Thiometon	Trichloronate	Tetrachlorvinphos	Fosetyl-al	Demeton-S-methyl	Fenamiphos	Formothion	Mirex	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Profenofos	Sulfotepp	Temephos	Trichlorfon	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)
				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	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
LOR				0.02	0.02	0.01	0.05	0.1	0.1	0.05	0.01	0.5	0.5	0.00001	10	0.02	0.01	20	0.02	0.004	0.01	0.01	0.01	0.005	0.02	0.02	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ANZG Freshwater Toxicant DGVs LOSP 95%																				0.004									0.6		0.03		
ANZG Freshwater Toxicant DGVs LOSP 99%																				0.0007									0.3		0.01		
PFAS NEMP 2018 Table 5 Freshwater 95%																																		
PFAS NEMP 2018 Table 5 Freshwater 99%																																		
NHMRC Managing Risks in Recreational Water 2008 (Health)				5	1				30	30	0.5	3		0.1			0.3	50		10	50	0.5	0.5		300	5								
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																																		
>=2m, <4m																																		
>=4m, <8m																																		
>=8m																																		
Buildings & Structures (AS2159-2009)																																		
Site ID	**Field ID**	**Date**																																
305001663	**MW01**	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	MW02	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	MW03	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	MW04	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	MW05	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	QA100	**25 Oct 2024**		<0.02	<0.02	<0.01	<0.1	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	<0.02	<0.01	<20	-	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	QC100	**25 Oct 2024**		<0.05	-	-	<0.05	-	-	<0.05	-	-	-	-	-	-	<0.05	-	<0.02	<0.004	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-

Stantec

Table 3: Groundwater Analytical Results

Project: 305001663
Site: Jordan Springs High School
Detailed Site Investigation

				SVOCs			Perfluorocarbons																												
				Coronene	EPN	Perylene	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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				0.1	0.05	0.1	0.001	0.001	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.0005	0.0005	0.001	0.001	0.0005	0.0005	0.002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.0002	0.001	0.0005
ANZG Freshwater Toxicant DGVs LOSP 95%																																			
ANZG Freshwater Toxicant DGVs LOSP 99%																																			
PFAS NEMP 2018 Table 5 Freshwater 95%																														0.13					220
PFAS NEMP 2018 Table 5 Freshwater 99%																														0.00023					19
NHMRC Managing Risks in Recreational Water 2008 (Health)																																			
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																																			
>=2m, <4m																																			
>=4m, <8m																																			
>=8m																																			
Buildings & Structures (AS2159-2009)																																			
Site ID	**Field ID**	**Date**																																	
305001663	**MW01**	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	0.0034	<0.0005	0.003	0.0013	0.0006	<0.0005	0.0302	<0.0005	0.0043	0.02	<0.0005
	MW02	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	0.001	<0.001	<0.001	<0.0005	<0.0005	0.007	<0.0005	0.0038	0.0017	0.0006	<0.0005	0.0528	<0.0005	0.0055	0.037	<0.0005
	MW03	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0020	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.0166	<0.0005	0.0006	0.016	<0.0005
	MW04	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0008	0.0027	<0.001	<0.001	<0.0005	<0.0005	0.0112	<0.0005	0.0035	0.0109	<0.0005	0.0057	0.302	<0.0005	0.0144	0.262	0.0028
	MW05	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0014	0.0185	<0.001	<0.001	<0.0005	<0.0005	<0.0020	<0.0005	0.0133	0.0105	<0.0005	<0.0005	0.0595	<0.0005	0.0238	0.01	0.0058
	QA100	**25 Oct 2024**		<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0007	0.0022	<0.001	<0.001	<0.0005	<0.0005	0.0102	<0.0005	0.0033	0.0092	<0.0005	0.0057	0.222	<0.0005	0.0125	0.186	0.0026
	QC100	**25 Oct 2024**		-	-	-	<0.05	<0.1	<0.5	<0.05	<0.01	<0.02	<0.05	<0.01	<0.1	<0.5	<0.1	<0.02	<0.02	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	0.22	<0.02	<0.01	0.22	<0.01

			NA						Other	Pesticides by LCMSMS (Positive		TPH					CRC Care TPH Fractions								
			Naphthalophos	Phosphate total (as P)	Sum of WA DWER PFAS (n=10)*	Total Other OC VIC EPA	Perfluorononane sulfonate (PFNS)	Acephate	Triazophos	Bensulide	Demeton-O & Demeton-S	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	Benzene	Toluene
			mg/L	MG/L	UG/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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR			0.001	0.01	0.0002	0.01	0.001	0.5	0.000005	0.1	0.02	20	50	100	50	50	20	50	100	100	100	20	50	1	1
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)																								600	110
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)																								950	180
PFAS NEMP 2018 Table 5 Freshwater 95%																									
PFAS NEMP 2018 Table 5 Freshwater 99%																									
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																									
>=2m, <4m																						10,000	10,000	8,000	
>=4m, <8m																						10,000	10,000	8,000	
>=8m																						10,000	10,000	9,000	
Buildings & Structures (AS2159-2009)																									
ANZECC 2000 Irrigation - Short-term trigger value																									
ANZECC 2000 Irrigation - Long-term trigger value																									
Site ID	**Field ID**	**Date**																							
305001663	**SW01**	**08 Oct 2024**	<0.0010	0.04	0.0053	-	-	<0.5	<0.000005	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	<2
	SW02	**08 Oct 2024**	<0.0010	0.04	0.0067	-	-	<0.5	<0.000005	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	8
	SW03	**08 Oct 2024**	<0.0010	0.05	0.0062	-	-	<0.5	<0.000005	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	4
	QA100	**08 Oct 2024**	<0.0010	0.06	0.0055	-	-	<0.5	<0.000005	<0.1	<0.02	<20	<50	<100	<50	<50	<20	<100	<100	<100	<100	<20	<100	<1	7
	QC100	**08 Oct 2024**	-	<0.01	0.0072	<0.01	<0.001	-	-	-	-	30	<50	<100	<100	<100	30	<50	<100	<100	<100	20	<50	<1	10

			BTEX						Metals																
			Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	Naphthalene (VOC)	Arsenic (filtered)	Cadmium (filtered)	Calcium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Magnesium (filtered)	Mercury (filtered)	Nickel (filtered)	Potassium (filtered)	Sodium (filtered)	Zinc (filtered)	Alkalinity (Bicarbonate as CaCO3)	Carbonate Alkalinity (as CaCO3)	Reactive Phosphorus as P (Orthophosphate as P)	Alkalinity (Hydroxide) as CaCO3	Alkalinity (total) as CaCO3
			µg/L	µg/L	µg/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	µg/L	µg/L	µg/L	µg/L	µg/L
LOR			1	2	1	2	1	5	1	0.1	1,000	1	1	1	1,000	0.1	1	1,000	1,000	5	1,000	1,000	10	1,000	1,000
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)			50		200			2.5		0.06			1	1		0.06	8			2.4					
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)			80		350			16		0.2			1.4	3.4		0.6	11			8					
PFAS NEMP 2018 Table 5 Freshwater 95%																									
PFAS NEMP 2018 Table 5 Freshwater 99%																									
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																									
>=2m, <4m																									
>=4m, <8m																									
>=8m																									
Buildings & Structures (AS2159-2009)																									
ANZECC 2000 Irrigation - Short-term trigger value									2,000	50		1,000	5,000	5,000		2	2,000			5,000					
ANZECC 2000 Irrigation - Long-term trigger value									100	10		100	200	2,000		2	200			2,000					
Site ID	**Field ID**	**Date**																							
305001663	**SW01**	**08 Oct 2024**	<2	<2	<2	<2	<1	<5	<1	<0.1	15,000	<1	1	<1	7,000	<0.1	<1	3,000	34,000	<5	48,000	20,000	<10	<1,000	68,000
	SW02	**08 Oct 2024**	<2	<2	<2	<2	8	<5	<1	<0.1	15,000	<1	2	<1	7,000	<0.1	<1	3,000	34,000	<5	48,000	22,000	<10	<1,000	70,000
	SW03	**08 Oct 2024**	<2	<2	<2	<2	4	<5	<1	<0.1	13,000	<1	6	<1	6,000	<0.1	1	3,000	34,000	<5	46,000	24,000	<10	<1,000	70,000
	QA100	**08 Oct 2024**	<2	<2	<2	<2	7	<5	<1	<0.1	-	<1	5	<1	-	<0.1	1	-	-	<5	-	-	<10	-	-
	QC100	**08 Oct 2024**	<1	<2	<1	<3	-	<10	<1	<0.2	-	<1	3	<1	-	<0.1	1	-	-	<5	-	-	-	-	-

				Inorganics									Organic											
				Ammonia as N	Anions Total	Cations Total	Chloride	Kjeldahl Nitrogen Total	Nitrate (as N)	Nitrite (as N)	Nitrate & Nitrite (as N)	Nitrogen (Total)	Sulfate as SO4 - Turbidimetric (filtered)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Naphthalene	2-methylnaphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene
				µg/L	meq/L	meq/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	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
LOR				10	0.01	0.01	1,000	100	10	10	10	100	1,000	0.001	0.001	0.001	0.01	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)				320													2.5					0.6	0.01	1		
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)				900													16					2	0.4	1.4		
PFAS NEMP 2018 Table 5 Freshwater 95%																										
PFAS NEMP 2018 Table 5 Freshwater 99%																										
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																										
>=2m, <4m																										
>=4m, <8m																										
>=8m																										
Buildings & Structures (AS2159-2009)							6,000,000																			
ANZECC 2000 Irrigation - Short-term trigger value												25,000														
ANZECC 2000 Irrigation - Long-term trigger value												5,000														
Site ID	**Field ID**	**Date**																								
305001663	**SW01**	**08 Oct 2024**		40	2.88	2.88	28,000	700	<10	<10	<10	700	35,000	<0.0020	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SW02	**08 Oct 2024**		20	2.92	2.88	29,000	700	<10	<10	<10	700	34,000	<0.0020	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	SW03	**08 Oct 2024**		20	2.94	2.7	29,000	700	<10	<10	<10	700	35,000	<0.0020	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	QA100	**08 Oct 2024**		20	-	-	-	700	<10	<10	<10	700	-	<0.0020	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	QC100	**08 Oct 2024**		-	-	-	-	300	60	<20	60	400	-	<0.001	0.0012	0.0012	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

				PAH																						
				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)	PAHs (Sum of total)	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(e)pyrene	Organochlorine pesticides IWRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD
				µg/L	µg/L	µg/L	mg/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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				0.01	0.01	0.01	0.00001	0.01	0.01	0.01	0.05	0.01	0.1	0.1	0.1	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)							0.0001															0.03				
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)							0.0002															0.08				
PFAS NEMP 2018 Table 5 Freshwater 95%																										
PFAS NEMP 2018 Table 5 Freshwater 99%																										
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																										
>=2m, <4m																										
>=4m, <8m																										
>=8m																										
Buildings & Structures (AS2159-2009)																										
ANZECC 2000 Irrigation - Short-term trigger value																										
ANZECC 2000 Irrigation - Long-term trigger value																										
Site ID	**Field ID**	**Date**																								
305001663	**SW01**	**08 Oct 2024**		<0.1	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	-	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	SW02	**08 Oct 2024**		<0.1	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	-	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	SW03	**08 Oct 2024**		<0.1	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	-	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	QA100	**08 Oct 2024**		<0.1	<0.1	<0.1	<0.00005	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<0.1	<0.1	-	<0.010	<0.010	<0.010	-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
	QC100	**08 Oct 2024**		<0.01	<0.01	<0.01	<0.00001	<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

				Organochlorine Pesticides																					
				DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Oxychlordane	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Bromophos-ethyl	Carbophenothion	Azinphos Ethyl	Chlorfenvinphos
				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	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR				0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01	0.01	0.01	0.00001	0.002	0.02	0.05	0.1	0.02	0.02	0.02
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)				0.006			0.03				0.01			0.07	0.01		0.05			0.0001	0.01					
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)				0.01			0.2				0.02			0.2	0.09		0.1			0.0002	0.02					
PFAS NEMP 2018 Table 5 Freshwater 95%																										
PFAS NEMP 2018 Table 5 Freshwater 99%																										
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																										
>=2m, <4m																										
>=4m, <8m																										
>=8m																										
Buildings & Structures (AS2159-2009)																										
ANZECC 2000 Irrigation - Short-term trigger value																										
ANZECC 2000 Irrigation - Long-term trigger value																										
Site ID	**Field ID**	**Date**																								
305001663	**SW01**	**08 Oct 2024**		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010	<0.010	<0.000010	-	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02
	SW02	**08 Oct 2024**		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010	<0.010	<0.000010	-	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02
	SW03	**08 Oct 2024**		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010	<0.010	<0.000010	-	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02
	QA100	**08 Oct 2024**		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.005	<0.010	<0.010	<0.010	<0.000010	-	<0.02	<0.05	<0.10	<0.02	<0.02	<0.02
	QC100	**08 Oct 2024**		<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	<1	<1	-	-	-	<1

			Organophosphorous Pesticides																					
			Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methidathion	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate
			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
LOR			0.02	0.2	0.01	0.02	0.02	0.01	0.2	0.02	0.05	0.02	0.01	1	0.01	0.05	0.02	0.001	0.1	0.5	0.02	0.02	1	0.01	0.1
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)			0.00004					0.00003		0.1				0.1			0.002								
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)			0.01					0.01		0.15				0.2			0.05								
PFAS NEMP 2018 Table 5 Freshwater 95%																									
PFAS NEMP 2018 Table 5 Freshwater 99%																									
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																									
>=2m, <4m																									
>=4m, <8m																									
>=8m																									
Buildings & Structures (AS2159-2009)																									
ANZECC 2000 Irrigation - Short-term trigger value																									
ANZECC 2000 Irrigation - Long-term trigger value																									
Site ID	**Field ID**	**Date**																							
305001663	**SW01**	**08 Oct 2024**	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	-	<0.1	<0.5	<0.02	<0.02	-	<0.01	<0.1
	SW02	**08 Oct 2024**	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	-	<0.1	<0.5	<0.02	<0.02	-	<0.01	<0.1
	SW03	**08 Oct 2024**	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	-	<0.1	<0.5	<0.02	<0.02	-	<0.01	<0.1
	QA100	**08 Oct 2024**	<0.02	<0.2	<0.01	<0.02	<0.02	<0.01	<0.20	<0.02	<0.05	<0.02	<0.01	<2	<0.01	<0.05	<0.02	-	<0.1	<0.5	<0.02	<0.02	-	<0.01	<0.1
	QC100	**08 Oct 2024**	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	-	<1	<1	<1	<1	<1	<1

									Fungicides	Insecticides	Pesticides											Polychlorinat			
			Prothiofos	Pyrazophos	Ronnel	Terbufos	Thiometon	Trichloronate	Tetrachlorvinphos	Fosetyl-al	Tokuthion	Demeton-S-methyl	Fenamiphos	Formothion	Parathion	Pirimiphos-methyl	Pirimphos-ethyl	Profenofos	Sulfotepp	Temephos	Trichlorfon	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242
			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	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR			0.1	0.1	1	0.01	0.5	0.5	0.00001	10	1	0.02	0.01	20	0.2	0.01	0.01	0.01	0.005	0.02	0.02	0.1	0.1	0.1	0.1
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)															0.0007										0.3
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)															0.004										0.6
PFAS NEMP 2018 Table 5 Freshwater 95%																									
PFAS NEMP 2018 Table 5 Freshwater 99%																									
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																									
>=2m, <4m																									
>=4m, <8m																									
>=8m																									
Buildings & Structures (AS2159-2009)																									
ANZECC 2000 Irrigation - Short-term trigger value																									
ANZECC 2000 Irrigation - Long-term trigger value																									
Site ID	**Field ID**	**Date**																							
305001663	**SW01**	**08 Oct 2024**	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	-	<0.02	<0.01	<20	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10
	SW02	**08 Oct 2024**	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	-	<0.02	<0.01	<20	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10
	SW03	**08 Oct 2024**	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	-	<0.02	<0.01	<20	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10
	QA100	**08 Oct 2024**	<0.1	<0.1	<10	<0.01	<0.5	<0.5	<0.00001	<10	-	<0.02	<0.01	<20	<0.2	<0.01	<0.01	<0.01	<0.005	<0.02	<0.02	<0.10	<0.10	<0.10	<0.10
	QC100	**08 Oct 2024**	-	<1	<1	<1	-	<1	<0.001	-	<1	-	-	-	<1	<10	-	-	-	-	-	<1	<1	<1	<1

					ed Biphenyls				SVOCs			Perfluorocarbons															
					Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Coronene	EPN	Perylene	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)
					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
LOR					0.1	0.1	0.1	0.1	0.1	0.05	0.1	0.001	0.001	0.001	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.0005	0.0005	0.001
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)						0.01																					
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)						0.03																					
PFAS NEMP 2018 Table 5 Freshwater 95%																											
PFAS NEMP 2018 Table 5 Freshwater 99%																											
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																											
>=2m, <4m																											
>=4m, <8m																											
>=8m																											
Buildings & Structures (AS2159-2009)																											
ANZECC 2000 Irrigation - Short-term trigger value																											
ANZECC 2000 Irrigation - Long-term trigger value																											
Site ID	**Field ID**	**Date**																									
305001663	**SW01**	**08 Oct 2024**	<0.10	<0.10	<0.10	<0.10	<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0008	0.0024	<0.001
	SW02	**08 Oct 2024**	<0.10	<0.10	<0.10	<0.10	<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0008	0.0033	<0.001
	SW03	**08 Oct 2024**	<0.10	<0.10	<0.10	<0.10	<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.0007	0.0028	<0.001
	QA100	**08 Oct 2024**	<0.10	<0.10	<0.10	<0.10	<0.1	<0.05	<0.1	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.001	0.0028	<0.001
	QC100	**08 Oct 2024**	<1	<1	<1	<1	-	<1	-	<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	0.003	<0.001

				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	ug/L	µg/L	µg/L	µg/L	µg/L
LOR				0.001	0.0005	0.0005	0.002	0.0005	0.0005	0.0001	0.0005	0.0005	0.0002	0.0005	0.0002	0.001	0.0005
ANZG Freshwater Toxicant DGVs LOSP 99% (July 2023)																	
ANZG Freshwater Toxicant DGVs LOSP 95% (July 2023)																	
PFAS NEMP 2018 Table 5 Freshwater 95%										0.13							220
PFAS NEMP 2018 Table 5 Freshwater 99%										0.00023							19
NEPM 2013 GW HSL Residential A&B, for Vapour Intrusion, Sand (x10)																	
>=2m, <4m																	
>=4m, <8m																	
>=8m																	
Buildings & Structures (AS2159-2009)																	
ANZECC 2000 Irrigation - Short-term trigger value																	
ANZECC 2000 Irrigation - Long-term trigger value																	
Site ID	**Field ID**	**Date**															
305001663	**SW01**	**08 Oct 2024**		<0.001	<0.0005	<0.0005	<0.0020	<0.0005	<0.0005	0.001	<0.0005	<0.0005	0.0053	<0.0005	0.001	<0.001	0.0011
	SW02	**08 Oct 2024**		<0.001	<0.0005	<0.0005	<0.0020	<0.0005	<0.0005	0.0014	<0.0005	<0.0005	0.0067	<0.0005	0.0014	<0.001	0.0012
	SW03	**08 Oct 2024**		<0.001	<0.0005	<0.0005	<0.0020	<0.0005	<0.0005	0.0018	<0.0005	<0.0005	0.0062	<0.0005	0.0018	<0.001	0.0009
	QA100	**08 Oct 2024**		<0.001	<0.0005	<0.0005	<0.0020	<0.0005	<0.0005	0.001	<0.0005	<0.0005	0.0055	<0.0005	0.001	<0.001	0.0007
	QC100	**08 Oct 2024**		<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	0.0012	<0.001	0.003	0.0072	<0.001	0.0012	<0.005	<0.001

Stantec

			Field Screen				Chromium Reducible Sulfur Suite												Liming
			pH (F)	pH (Fox)	pH Difference	Reaction Rate	Chromium Reducible Sulfur	pH (KCl)	Titratable Actual Acidity	HCl Extractable Sulfur	KCl Extractable Sulfur	Net Acid Soluble Sulfur (in sulfur units)	Retained Acidity	Acid Neutralising Capacity - BT (ANC-BT)	Acid Neutralising Capacity - BT (ANC-BT)	Acid Neutralising Capacity - BT (ANC-BT)	CRS Suite - Net Acidity (Acidity Units)	CRS Suite - Net Acidity (Sulfur Units)	CaCO3 equivalent neutralising
			pH Unit	pH Unit	pH Unit	-	%S	pH Unit	mol H+/t	%S	%S	%S	%S	% CaCO3	mol H+/t	kg/CaCO3	mol H+/t	% S	kg/CaCO3
LOR			0.1	0.1		0	0.005	0.1	2	0.005	0.005	Calculated	Calculated	0.01	Calculated	Calculated	Calculated	Calculated	Calculated
ASSMAC (1998) / NASSG (2018) Action Criteria - Fine Soils (>1000 tonnes)																	18	0.03	
NASSG (2018) Sulfidic Soils, potential AASS							0.01	≤ 4											
ASSMAC (1998) Actual Acid Sulfate Soil Indicator Value			≤ 4																
ASSMAC (1998) Potential Acid Sulfate Soil Indicator Value			>4	<3	>1														
Location	**Depth**	**Source**																	
TP11_2.2-2.3	**2.2-2.3**	**Soil**	5	7.6	2.6	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
TP11_2.6-2.7	**2.6-2.7**	**Soil**	7.5	7.2	-0.3	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH01_4.3	**4.3**	**Soil**	6.3	4.4	-1.9	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH01_5	**5.0**	**Soil**	6.4	4.4	-2	3	0.029	5.9	5	-	-	-	-	N/A	-	-	23.09	0.04	1.16
BH01_5.5	**5.5**	**Soil**	6.6	4.4	-2.2	3	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH01_6	**6.0**	**Soil**	6.1	4.4	-1.7	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH01_6.5	**6.5**	**Soil**	6.1	7	0.9	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH01_7	**7.0**	**Soil**	5.9	5.2	-0.7	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH03_4.5	**4.5**	**Soil**	4.8	3.5	-1.3	2	0.017	4.3	56	<0.02	<0.02	-	-	N/A	-	-	66.60	0.11	3.33
BH03_5	**5.0**	**Soil**	4.9	3.8	-1.1	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH03_5.5	**5.5**	**Soil**	4.7	4.1	-0.6	2	0.021	4.4	36	<0.02	<0.02	-	-	N/A	-	-	49.10	0.08	2.46
BH03_6	**6.0**	**Soil**	4.9	4.8	-0.1	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH03_6.5	**6.5**	**Soil**	5.3	6.7	1.4	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH03_7	**7.0**	**Soil**	5.1	6.9	1.8	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH03_7.5	**7.5**	**Soil**	5.3	6.8	1.5	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH04_5	**5.0**	**Soil**	7.1	4.7	-2.4	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH04_5.5	**5.5**	**Soil**	6.9	5	-1.9	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH05_4.3	**4.3**	**Soil**	9.5	8.8	-0.7	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH05_4.5	**4.5**	**Soil**	9.2	9.2	0	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH05_5	**5.0**	**Soil**	8.2	7.2	-1	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH05_5.5	**5.5**	**Soil**	8.1	7.6	-0.5	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH05_6	**6.0**	**Soil**	9.2	6.4	-2.8	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH07_5	**5.0**	**Soil**	8.3	7.6	-0.7	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH07_5.5	**5.5**	**Soil**	7.9	7.4	-0.5	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH07_6	**6.0**	**Soil**	8.1	7.9	-0.2	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_3.5	**3.5**	**Soil**	6.9	7.2	0.3	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_4.0	**4.0**	**Soil**	6.7	7.6	0.9	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_4.5	**4.5**	**Soil**	7	7.5	0.5	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_5.0	**5.0**	**Soil**	7.9	8.3	0.4	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_5.5	**5.5**	**Soil**	7.8	8.2	0.4	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH08_6.0	**6.0**	**Soil**	8.2	8.6	0.4	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH09_4.5	**4.5**	**Soil**	8.2	7.8	-0.4	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH09_5	**5.0**	**Soil**	8.8	8.9	0.1	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH09_5.5	**5.5**	**Soil**	8.4	8.9	0.5	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH09_6	**6.0**	**Soil**	8.6	8.8	0.2	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH10_4.0	**4.0**	**Soil**	6.2	7.4	1.2	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH10_4.5	**4.5**	**Soil**	7.6	7.2	-0.4	4	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH12_5.0	**5.0**	**Soil**	6.8	4.3	-2.5	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH12_5.5	**5.5**	**Soil**	6	3.1	-2.9	2	0.019	6	3	-	-	-	-	N/A	-	-	14.85	0.02	0.74
BH202_5	**5.0**	**Soil**	7.1	4.6	-2.5	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH202_6	**6.0**	**Soil**	5.2	3.4	-1.8	2	0.025	4.3	62	<0.02	<0.02	-	-	N/A	-	-	77.59	0.12	3.88
BH202_8.5	**8.5**	**Soil**	5.5	4.7	-0.8	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH203_7.0	**7.0**	**Soil**	5.8	5.1	-0.7	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH203_8.5	**8.5**	**Soil**	5.8	4.4	1.4	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-
BH203_10.0	**10.0**	**Soil**	6.4	5.2	1.2	2	-	-	-	-	-	-	-	N/A	-	-	-	-	-

Appendix F Laboratory Certificates

Environmental Division
Sydney
Work Order Reference
ES2432838

Telephone : +61-2-8784 8555

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Michael Koerner**
Email: michael.koerner@stantec.com
Mobile: **476978773**

To: ALS Sydney
Address:
277-289 Woodpark Road
Smithfield NSW 2164
Phone: (02) 8784 8555
Email: ALSEnviro.Sydney@alsglobal.com

Date: 8/10/2024
TAT: Standard
Purchase Order: 305001633
Laboratory Quote ID: ES24MWHAUS0006
Project number: 305001633
Project name: Jordan Springs HS
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Stantec 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	S-2 - 7 Metals	S-1 - 8 Metals	S-3 - NEPM 15 Metals	Phenols	VOCs	SVOC	Hold	NT-08A	NT-01 & 02	UTO 10W	W-05	EP132B(PAH)	HP231X-SUT	Total Metals (Sb, Ag)	Applicable Suites	Sample Comments
1	SW01	2/10/2024	Water	-																1	1	1	1	1	1			
2	SW02	8/10/2024	Water	-																1	1	1	1	1	1			
3	SW03	8/10/2024	Water	-																1	1	1	1	1	1			
4 26	QA100	8/10/2024	Water	-																1		1	1	1	1			
	QC100	8/10/2024	Water	-															1									Please forward to Eurofins
5	SED01_0.1	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
6	SED02_0.15	8/10/2024	Soil	-															1									
7	SED02_0.5	8/10/2024	Soil	-															1									
8	SED03_0.1	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
9	SED03_0.5	8/10/2024	Soil	-															1									
10	SED04_0.1	8/10/2024	Soil	-															1									
11	SED04_0.5	8/10/2024	Soil	-															1									
12	SED05_0.1	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
13	SED05_0.3	8/10/2024	Soil	-															1									
14	SED06_0.1	8/10/2024	Soil	-															1									
				Total	3		3	3	3	3	3			3					8	4	3	4	4					

Notes:	Relinquished By: Michael Koerner	Received By:	Relinquished By:	Received By:
	Company: Stantec	Company:	Company:	Company:
	Time: 5:28 PM	Time:	Time:	Time:
	Date:	Date:	Date:	Date:

Subcon / Courier / Split WO: Eurofins
Lab / Analysis: _____
Organised By / Date: _____
Relinquished By / Date: _____
Connote / Courier: _____
WO No: ES2432838

rec: FAM 9/10/24 11:20am

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
203 Pacific Highway
St Leonards NSW 2065
Phone: (02) 8484 7000
Attention: **Michael Koerner**
Email: michael.koerner@stantec.com; ewie.dillon@stantec.com
Mobile: **476978773**

To: ALS Sydney
Address:
277-289 Woodpark Road
Smithfield NSW 2164
Phone: (02) 8784 8555
Email: ALSEnviro.Sydney@alsglobal.com

Date: 8/10/2024
TAT: Standard
Purchase Order: 305001633
Laboratory Quote ID: ES24MWHAUS0006
Project number: 305001633
Project name: Jordan Springs HS
Data output format: PDF, Esdat

Attempt to chill evident: Y / N Sample Temperature on Arrival: _____

Notes:

Laboratory Sample Number	Stantec 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	S-2 - 7 Metals	S-1 - 8 Metals	S-3 NEPM 15 Metals	Phenols	VOCs	SVOC	Hold	NT-08A	NT-01 & 02	UTO-10W	W-05	EP1328(PAH)	EP231X-SUT	Total Metals (Sb, Ag)	Applicable Suites	Sample Comments
15	SED06_0.25	8/10/2024	Soil	-															1									
16	SED07_0.15	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
17	SED07_0.5	8/10/2024	Soil	-															1									
18	SED08_0.1	8/10/2024	Soil	-															1									
19	SED09_0.1	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
20	SED09_0.4	8/10/2024	Soil	-															1									
21 25	QA200	8/10/2024	Soil	-	1		1	1	1	1	1			1												1	S-16	
	QC200	8/10/2024	Soil	-															1									Please forward to Eurofins
22	QA200(P)	8/10/2024	Soil	-															1									
23	QC200(P)	8/10/2024	Soil	-															1									
24	SED01_0.1		Soil																									
				Total:	3		3	3	3	3	3			3					7									

CERTIFICATE OF ANALYSIS

Work Order	: **ES2432838**	Page	: 1 of 22
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001633 Jordan Springs HS	Date Samples Received	: 09-Oct-2024 11:20
Order number	: 305001633	Date Analysis Commenced	: 09-Oct-2024
C-O-C number	: ----	Issue Date	: 15-Oct-2024 19:15
Sampler	: ----		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 24		
No. of samples analysed	: 10		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP131A: 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 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.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP234: Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
- Sample 11 ID on the COC is SED04_0.5, received as SED04_0.3
- Sample 24 " SED01_0.8" received extra has been placed on hold, please confirm
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: SOIL
(Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Sample ID	SED01_0.1	SED03_0.1	SED05_0.1 received as SED05_0.2	SED07_0.15	SED09_0.1
				Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00
					ES2432838-005	ES2432838-008	ES2432838-012	ES2432838-016	ES2432838-019
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**21.5**	**16.7**	**14.8**	**24.8**	**16.8**
EG005(ED093)T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		<5	----	----	----	----
Silver	7440-22-4	2	mg/kg		<2	----	----	----	----
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**8**	**9**	**8**	**8**	**8**
Copper	7440-50-8	5	mg/kg		<5	<5	<5	**10**	<5
Lead	7439-92-1	5	mg/kg		**8**	**7**	**8**	**9**	**6**
Nickel	7440-02-0	2	mg/kg		**4**	**5**	**5**	**6**	**4**
Zinc	7440-66-6	5	mg/kg		**15**	**15**	**16**	**38**	**15**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<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	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SED01_0.1	SED03_0.1	SED05_0.1 received as SED05_0.2	SED07_0.15	SED09_0.1
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2432838-005	ES2432838-008	ES2432838-012	ES2432838-016	ES2432838-019
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL
(Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Sample ID	SED01_0.1	SED03_0.1	SED05_0.1 received as SED05_0.2	SED07_0.15	SED09_0.1
				Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00
					ES2432838-005	ES2432838-008	ES2432838-012	ES2432838-016	ES2432838-019
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<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	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SED01_0.1	SED03_0.1	SED05_0.1 received as SED05_0.2	SED07_0.15	SED09_0.1
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2432838-005	ES2432838-008	ES2432838-012	ES2432838-016	ES2432838-019
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg	<50	<50	<50	<50	<50
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<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	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SED01_0.1	SED03_0.1	SED05_0.1 received as SED05_0.2	SED07_0.15	SED09_0.1
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2432838-005	ES2432838-008	ES2432838-012	ES2432838-016	ES2432838-019
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
^ **Sum of BTEX**	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**83.7**	**77.9**	**84.3**	**75.7**	**68.7**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**104**	**116**	**124**	**113**	**102**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**78.9**	**96.3**	**97.1**	**102**	**80.1**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**91.4**	**88.4**	**87.8**	**89.4**	**88.4**
2-Chlorophenol-D4	93951-73-6	0.5	%	**89.5**	**86.6**	**85.4**	**88.2**	**87.6**
2.4.6-Tribromophenol	118-79-6	0.5	%	**80.3**	**95.0**	**74.3**	**87.0**	**94.7**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**102**	**97.8**	**97.1**	**101**	**99.6**
Anthracene-d10	1719-06-8	0.5	%	**92.0**	**89.0**	**87.8**	**90.3**	**89.1**
4-Terphenyl-d14	1718-51-0	0.5	%	**91.6**	**88.8**	**87.1**	**91.4**	**90.0**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**64.6**	**64.6**	**65.5**	**80.0**	**89.5**
Toluene-D8	2037-26-5	0.2	%	**77.0**	**75.4**	**78.7**	**89.0**	**94.0**
4-Bromofluorobenzene	460-00-4	0.2	%	**115**	**112**	**116**	**90.7**	**95.2**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA200	----	----	----	----
				Sampling date / time	09-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2432838-025	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**15.6**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Antimony	7440-36-0	5	mg/kg		<5	----	----	----	----
Silver	7440-22-4	2	mg/kg		<2	----	----	----	----
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		**8**	----	----	----	----
Copper	7440-50-8	5	mg/kg		<5	----	----	----	----
Lead	7439-92-1	5	mg/kg		**9**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		**5**	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**17**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA200	----	----	----	----
				Sampling date / time	09-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2432838-025	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA200	----	----	----	----
				Sampling date / time	09-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2432838-025	--------	--------	--------	--------
					Result	----	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA200	----	----	----	----
				Sampling date / time	09-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2432838-025	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA200	----	----	----	----
				Sampling date / time	09-Oct-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2432838-025	--------	--------	--------	--------
					Result	----	----	----	----
EP066S: PCB Surrogate - Continued									
Decachlorobiphenyl	2051-24-3	0.1	%		**70.5**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**104**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**79.8**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**89.5**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**87.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**75.3**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**99.7**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**89.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**89.4**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**93.0**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**97.7**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**98.6**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SW01	SW02	SW03	QA100	----
				Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit		ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
					Result	Result	Result	Result	----
ED037P: Alkalinity by PC Titrator									
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L		<1	<1	<1	----	----
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L		**20**	**22**	**24**	----	----
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L		**48**	**48**	**46**	----	----
Total Alkalinity as CaCO3	----	1	mg/L		**68**	**70**	**70**	----	----
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA									
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L		**35**	**34**	**35**	----	----
ED045G: Chloride by Discrete Analyser									
Chloride	16887-00-6	1	mg/L		**28**	**29**	**29**	----	----
ED093F: Dissolved Major Cations									
Calcium	7440-70-2	1	mg/L		**15**	**15**	**13**	----	----
Magnesium	7439-95-4	1	mg/L		**7**	**7**	**6**	----	----
Sodium	7440-23-5	1	mg/L		**34**	**34**	**34**	----	----
Potassium	7440-09-7	1	mg/L		**3**	**3**	**3**	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
Chromium	7440-47-3	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Copper	7440-50-8	0.001	mg/L		**0.001**	**0.002**	**0.006**	**0.005**	----
Nickel	7440-02-0	0.001	mg/L		<0.001	<0.001	**0.001**	**0.001**	----
Lead	7439-92-1	0.001	mg/L		<0.001	<0.001	<0.001	<0.001	----
Zinc	7440-66-6	0.005	mg/L		<0.005	<0.005	<0.005	<0.005	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	----
EK055G: Ammonia as N by Discrete Analyser									
Ammonia as N	7664-41-7	0.01	mg/L		**0.04**	**0.02**	**0.02**	**0.02**	----
EK057G: Nitrite as N by Discrete Analyser									
Nitrite as N	14797-65-0	0.01	mg/L		<0.01	<0.01	<0.01	<0.01	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EK058G: Nitrate as N by Discrete Analyser								
Nitrate as N	14797-55-8	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser								
Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser								
Total Kjeldahl Nitrogen as N	----	0.1	mg/L	**0.7**	**0.7**	**0.7**	**0.7**	----
EK062G: Total Nitrogen as N (TKN + NOx) by Discrete Analyser								
^ Total Nitrogen as N	----	0.1	mg/L	**0.7**	**0.7**	**0.7**	**0.7**	----
EK067G: Total Phosphorus as P by Discrete Analyser								
Total Phosphorus as P	----	0.01	mg/L	**0.04**	**0.04**	**0.05**	**0.06**	----
EK071G: Reactive Phosphorus as P by discrete analyser								
Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	<0.01	<0.01	----
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	**2.88**	**2.92**	**2.94**	----	----
ø Total Cations	----	0.01	meq/L	**2.88**	**2.88**	**2.70**	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	<20	<20	----
C10 - C14 Fraction	----	50	µg/L	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	µg/L	<100	<100	<100	<100	----
C29 - C36 Fraction	----	50	µg/L	<50	<50	<50	<50	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	<20	<20	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	<20	<20	<20	----
>C10 - C16 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C16 - C34 Fraction	----	100	µg/L	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	µg/L	<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	<100	<100	<100	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L	<100	<100	<100	<100	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	<1	<1	<1	----
Toluene	108-88-3	2	µg/L	<2	**8**	**4**	**7**	----
Ethylbenzene	100-41-4	2	µg/L	<2	<2	<2	<2	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	<2	<2	----
ortho-Xylene	95-47-6	2	µg/L	<2	<2	<2	<2	----
^ **Total Xylenes**	----	2	µg/L	<2	<2	<2	<2	----
^ **Sum of BTEX**	----	1	µg/L	<1	**8**	**4**	**7**	----
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	----
EP131A: Organochlorine Pesticides								
Aldrin	309-00-2	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
alpha-BHC	319-84-6	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
beta-BHC	319-85-7	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
delta-BHC	319-86-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
4.4`-DDD	72-54-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
4.4`-DDE	72-55-9	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
4.4`-DDT	50-29-3	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Dieldrin	60-57-1	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
alpha-Endosulfan	959-98-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
beta-Endosulfan	33213-65-9	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Endosulfan sulfate	1031-07-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
^ **Endosulfan (sum)**	115-29-7	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Endrin	72-20-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Endrin aldehyde	7421-93-4	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EP131A: Organochlorine Pesticides - Continued								
Endrin ketone	53494-70-5	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Heptachlor	76-44-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
Heptachlor epoxide	1024-57-3	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Hexachlorobenzene (HCB)	118-74-1	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
gamma-BHC - (Lindane)	58-89-9	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Methoxychlor	72-43-5	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
cis-Chlordane	5103-71-9	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
trans-Chlordane	5103-74-2	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
^ Total Chlordane (sum)	----	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
Oxychlordane	27304-13-8	0.010	µg/L	<0.010	<0.010	<0.010	<0.010	----
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Total Polychlorinated biphenyls	----	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1016	12674-11-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1221	11104-28-2	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1232	11141-16-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1242	53469-21-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1248	12672-29-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1254	11097-69-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Aroclor 1260	11096-82-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SW01	SW02	SW03	QA100	----
				Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit		ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
					Result	Result	Result	Result	----
EP132B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Chrysene	218-01-9	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Coronene	191-07-1	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Fluorene	86-73-7	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Perylene	198-55-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
Pyrene	129-00-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	----
^ Sum of PAHs	----	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
^ Benzo(a)pyrene TEQ (zero)	----	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L		<0.0020	<0.0020	<0.0020	<0.0020	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L		**0.0010**	**0.0014**	**0.0018**	**0.0010**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	SW01	SW02	SW03	QA100	----
				Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit		ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
					Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L		<0.0020	<0.0020	<0.0020	<0.0020	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L		**0.0008**	**0.0008**	**0.0007**	**0.0010**	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L		**0.0024**	**0.0033**	**0.0028**	**0.0028**	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L		**0.0011**	**0.0012**	**0.0009**	**0.0007**	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	<0.0005	<0.0005	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	<0.001	<0.001	----
EP231P: PFAS Sums								
^ **Sum of PFHxS and PFOS**	355-46-4/1763-23-1	0.0002	µg/L	**0.0010**	**0.0014**	**0.0018**	**0.0010**	----
^ **Sum of PFAS (WA DER List)**	----	0.0002	µg/L	**0.0053**	**0.0067**	**0.0062**	**0.0055**	----
^ **Sum of PFAS**	----	0.0002	µg/L	**0.0053**	**0.0067**	**0.0062**	**0.0055**	----
EP234A: OP Pesticides								
Acephate	30560-19-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Bensulide	741-58-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Bromophos-ethyl	4824-78-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	----
Carbofenothion	786-19-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	----
Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EP234A: OP Pesticides - Continued								
Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Dichlorvos	62-73-7	0.20	µg/L	<0.20	<0.20	<0.20	<0.20	----
Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	<10	<10	----
Fenitrothion	122-14-5	2	µg/L	<2	<2	<2	<2	----
Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Formothion	2540-82-1	20	µg/L	<20	<20	<20	<20	----
Fosetyl Aluminium	39148-24-8	10	µg/L	<10	<10	<10	<10	----
Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Methidathion	950-37-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Naftalofos	1491-41-4	1.0	µg/L	<1.0	<1.0	<1.0	<1.0	----
Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	----
Parathion-methyl	298-00-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	SW01	SW02	SW03	QA100	----
			Sampling date / time	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	08-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2432838-001	ES2432838-002	ES2432838-003	ES2432838-026	--------
				Result	Result	Result	Result	----
EP234A: OP Pesticides - Continued								
Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Pyrazophos	13457-18-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----
Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----
Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	----
Thiometon	640-15-3	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	----
Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----
Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	2	%	**102**	**98.2**	**103**	**106**	----
Toluene-D8	2037-26-5	2	%	**99.8**	**99.7**	**97.3**	**99.4**	----
4-Bromofluorobenzene	460-00-4	2	%	**91.1**	**91.3**	**91.5**	**93.9**	----
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.010	%	**67.8**	**143**	**99.1**	**139**	----
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.10	%	**75.2**	**115**	**104**	**103**	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	**60.9**	**89.0**	**84.0**	**83.2**	----
Anthracene-d10	1719-06-8	0.1	%	**57.9**	**88.2**	**81.4**	**77.6**	----
4-Terphenyl-d14	1718-51-0	0.1	%	**68.6**	**107**	**95.6**	**91.2**	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0005	%	**98.5**	**119**	**112**	**110**	----
13C8-PFOA	----	0.0005	%	**103**	**97.9**	**98.2**	**103**	----

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

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	14	166
EP131T: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	144
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2432838**	Page	: 1 of 25
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001633 Jordan Springs HS	Date Samples Received	: 09-Oct-2024
Order number	: 305001633	Date Analysis Commenced	: 09-Oct-2024
C-O-C number	: ----	Issue Date	: 15-Oct-2024
Sampler	: ----		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 24		
No. of samples analysed	: 10		

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*
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 6110732)									
ES2432737-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Antimony	7440-36-0	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	86	88	2.1	0% - 50%
ES2432992-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	8	10	17.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	72	74	2.5	0% - 20%
		EG005T: Silver	7440-22-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Antimony	7440-36-0	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	40	47	17.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	30	32	5.3	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6110737)									
ES2432838-005	SED01_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	21.5	20.9	2.9	0% - 20%
ES2432992-002	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	8.0	9.8	20.0	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 (%)*
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6110731)									
ES2432737-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2432992-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6108393)									
ES2432838-005	SED01_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6108392)									
ES2432838-005	SED01_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6108392)									
ES2432838-005	SED01_0.1	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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6108392) - continued									
ES2432838-005	SED01_0.1	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6108390)									
ES2432838-005	SED01_0.1	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: 6108391)									
ES2432838-005	SED01_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6110004)									
ES2432661-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2432807-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6108391)									
ES2432838-005	SED01_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6110004)									
ES2432661-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2432807-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6110004)									
ES2432661-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2432807-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6108907)									
ES2432718-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	<1	<1	0.0	No Limit
ES2432878-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	6690	6810	1.8	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	6690	6810	1.8	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6109845)									
EN2412524-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	34	34	0.0	0% - 20%
ES2432878-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1 (100)*	mg/L	<100	<100	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 6109843)									
EN2412524-001	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	51	51	0.0	0% - 20%

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
ED045G: Chloride by Discrete Analyser (QC Lot: 6109843) - continued									
ES2432878-001	Anonymous	ED045G: Chloride	16887-00-6	1 (100)*	mg/L	2420	2220	8.7	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6112222)									
ES2432838-002	SW02	ED093F: Calcium	7440-70-2	1	mg/L	15	15	0.0	0% - 50%
		ED093F: Magnesium	7439-95-4	1	mg/L	7	7	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	34	33	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	3	3	0.0	No Limit
EN2412386-003	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	7	7	0.0	No Limit
		ED093F: Magnesium	7439-95-4	1	mg/L	9	9	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	51	51	0.0	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	5	5	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 6112224)									
ES2432809-006	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.016	0.014	8.2	No Limit
EN2412386-003	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.001	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.010	0.009	0.0	No Limit
EG020F: Dissolved Metals by ICP-MS (QC Lot: 6113145)									
EN2412631-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.014	0.014	0.0	0% - 50%
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 6112223)									
EN2412386-004	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2432809-005	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 6113144)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG035F: Dissolved Mercury by FIMS (QC Lot: 6113144) - continued									
EN2412631-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EK055G: Ammonia as N by Discrete Analyser (QC Lot: 6115687)									
EN2412386-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.05	0.06	24.0	No Limit
EN2412727-009	Anonymous	EK055G: Ammonia as N	7664-41-7	0.01	mg/L	0.42	0.43	0.0	0% - 20%
EK057G: Nitrite as N by Discrete Analyser (QC Lot: 6109844)									
EN2412524-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2432878-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.01 (1.00)*	mg/L	<1.00	<1.00	0.0	No Limit
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QC Lot: 6115686)									
EN2412386-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.02	73.5	No Limit
EN2412727-009	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	0.13	0.13	0.0	0% - 50%
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QC Lot: 6115683)									
EN2412386-002	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.4	0.4	0.0	No Limit
EN2412727-009	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	0.6	0.6	0.0	No Limit
EK067G: Total Phosphorus as P by Discrete Analyser (QC Lot: 6115682)									
EN2412386-002	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.02	0.02	0.0	No Limit
EN2412727-009	Anonymous	EK067G: Total Phosphorus as P	----	0.01	mg/L	0.02	0.09	126	No Limit
EK071G: Reactive Phosphorus as P by discrete analyser (QC Lot: 6109846)									
ES2432718-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
ES2432878-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.01 (1.00)*	mg/L	12.2	13.4	9.5	0% - 50%
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6116828)									
ES2433310-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116828)									
ES2433310-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 6116828)									
ES2433310-003	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6110294)									
EB2434309-001	Anonymous	EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	0.0004	0.0004	0.0	No Limit
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6110294) - continued									
EB2434309-001	Anonymous	EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6110294)									
EB2434309-001	Anonymous	EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6110294)									
EB2434309-001	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6110294)									
EB2434309-001	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6110294)									
EB2434309-001	Anonymous	EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	0.0004	0.0004	0.0	No Limit
		EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	0.0004	0.0004	0.0	No Limit
		EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	0.0004	0.0004	0.0	No Limit
EP234A: OP Pesticides (QC Lot: 6108739)									
EM2417230-001	Anonymous	EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	<10	0.0	No Limit
		EP234-1x: Formothion	2540-82-1	20	µg/L	<20	<20	0.0	No Limit
EP234A: OP Pesticides (QC Lot: 6108740)									
ME2401604-001	Anonymous	EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP234A: OP Pesticides (QC Lot: 6108740) - continued									
ME2401604-001	Anonymous	EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	<0.10	0.0	No Limit
		EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	<0.20	0.0	No Limit
		EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Parathion-methyl	298-00-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	0.0	No Limit
		EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	<2	0.0	No Limit
EM2417230-001	Anonymous	EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP234A: OP Pesticides (QC Lot: 6108740) - continued									
EM2417230-001	Anonymous	EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	<0.10	0.0	No Limit
		EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	<0.20	0.0	No Limit
		EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Parathion-methyl	298-00-0	0.5 (2.0)*	µg/L	<2.0	<2.0	0.0	No Limit
		EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	0.0	No Limit
		EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	<2	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: 6110732)								
EG005T: Antimony	7440-36-0	5	mg/kg	<5	----	----	----	----
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	95.7	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	85.7	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	123	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	99.7	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	109	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	111	80.0	120
EG005T: Silver	7440-22-4	2	mg/kg	<2	2.3 mg/kg	111	42.0	158
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	98.9	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6110731)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	91.4	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6108393)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	82.8	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6108392)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	79.5	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	80.1	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.1	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	77.1	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.4	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.3	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.6	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	69.0	121

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: 6108392) - continued								
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	90.5	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	92.7	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6108392)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	80.7	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	100	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	83.2	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	81.1	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	77.4	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	100	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.3	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	80.1	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.5	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.2	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	78.8	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	92.3	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6108390)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	98.4	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	92.8	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	93.8	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	94.9	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	98.2	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	97.8	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	95.2	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	95.2	74.0	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6108390) - continued								
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	88.3	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	95.1	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	84.8	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	84.8	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	88.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	88.6	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	86.2	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	88.6	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6108391)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	103	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	108	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	115	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6110004)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	95.0	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6108391)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	105	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	111	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	116	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6110004)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	95.3	72.4	133
EP080: BTEXN (QCLot: 6110004)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	86.3	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.6	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	91.8	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	103	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	106	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	97.2	78.8	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED037P: Alkalinity by PC Titrator (QCLot: 6108907)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	---- ----	200 mg/L 50 mg/L	99.5 107	81.0 80.0	115 128

Sub-Matrix: **WATER**

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
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6109845)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	98.5	82.0	122
				<1	500 mg/L	97.6	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 6109843)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	96.5	80.9	127
				<1	1000 mg/L	93.3	80.9	127
ED093F: Dissolved Major Cations (QCLot: 6112222)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	101	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	101	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	99.3	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	103	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 6112224)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	102	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	97.0	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	99.0	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	98.9	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	96.9	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	97.4	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	100	81.0	117
EG020F: Dissolved Metals by ICP-MS (QCLot: 6113145)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	93.0	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	92.1	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.6	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	91.0	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	91.5	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	89.8	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	94.7	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 6112223)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	99.9	83.0	105
EG035F: Dissolved Mercury by FIMS (QCLot: 6113144)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	104	83.0	105
EK055G: Ammonia as N by Discrete Analyser (QCLot: 6115687)								
EK055G: Ammonia as N	7664-41-7	0.01	mg/L	<0.01	0.5 mg/L	100	90.0	114
EK057G: Nitrite as N by Discrete Analyser (QCLot: 6109844)								
EK057G: Nitrite as N	14797-65-0	0.01	mg/L	<0.01	0.5 mg/L	99.2	82.0	114

Sub-Matrix: **WATER**

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
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6115686)								
EK059G: Nitrite + Nitrate as N	----	0.01	mg/L	<0.01	0.5 mg/L	100.0	91.0	113
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6115683)								
EK061G: Total Kjeldahl Nitrogen as N	----	0.1	mg/L	<0.1	10 mg/L	90.2	69.0	123
				<0.1	1 mg/L	100	70.0	123
				<0.1	5 mg/L	90.7	70.0	123
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 6115682)								
EK067G: Total Phosphorus as P	----	0.01	mg/L	<0.01	4.42 mg/L	94.6	71.3	126
				<0.01	0.442 mg/L	101	71.3	126
				<0.01	1 mg/L	96.8	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 6109846)								
EK071G: Reactive Phosphorus as P	14265-44-2	0.01	mg/L	<0.01	0.5 mg/L	98.6	85.0	117
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6107928)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	58.8	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	73.6	63.3	107
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	76.6	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116828)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	102	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6107928)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	63.0	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	76.3	57.8	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	71.5	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116828)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	101	75.0	127
EP080: BTEXN (QCLot: 6116828)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	103	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	103	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	96.2	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	108	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	110	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	119	75.5	124
EP131A: Organochlorine Pesticides (QCLot: 6107932)								
EP131A: Aldrin	309-00-2	0.01	µg/L	<0.010	1.1 µg/L	73.8	34.0	145
EP131A: alpha-BHC	319-84-6	0.01	µg/L	<0.010	1.1 µg/L	100	27.2	131

Sub-Matrix: **WATER**

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
EP131A: Organochlorine Pesticides (QCLot: 6107932) - continued								
EP131A: beta-BHC	319-85-7	0.01	µg/L	<0.010	1.1 µg/L	78.2	28.6	133
EP131A: delta-BHC	319-86-8	0.01	µg/L	<0.010	1.1 µg/L	93.0	36.0	131
EP131A: 4.4`-DDD	72-54-8	0.01	µg/L	<0.010	1.1 µg/L	102	36.0	142
EP131A: 4.4`-DDE	72-55-9	0.01	µg/L	<0.010	1.1 µg/L	82.1	30.4	112
EP131A: 4.4`-DDT	50-29-3	0.01	µg/L	<0.010	1.1 µg/L	77.8	29.5	142
EP131A: Dieldrin	60-57-1	0.01	µg/L	<0.010	1.1 µg/L	104	28.1	122
EP131A: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	1.1 µg/L	88.4	34.0	119
EP131A: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	1.1 µg/L	89.4	31.6	128
EP131A: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	1.1 µg/L	68.0	35.0	159
EP131A: Endrin	72-20-8	0.01	µg/L	<0.010	1.1 µg/L	119	21.5	165
EP131A: Endosulfan (sum)	115-29-7	0.01	µg/L	<0.010	----	----	----	----
EP131A: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	1.1 µg/L	74.1	22.7	123
EP131A: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	1.1 µg/L	105	16.3	144
EP131A: Heptachlor	76-44-8	0.005	µg/L	<0.005	1.1 µg/L	97.9	33.0	160
EP131A: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	1.1 µg/L	99.2	33.0	117
EP131A: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	1.1 µg/L	86.8	23.6	126
EP131A: gamma-BHC - (Lindane)	58-89-9	0.01	µg/L	<0.010	1.1 µg/L	96.0	28.7	134
EP131A: Methoxychlor	72-43-5	0.01	µg/L	<0.010	1.1 µg/L	91.1	29.5	150
EP131A: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	1.1 µg/L	90.4	27.0	116
EP131A: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	1.1 µg/L	97.8	31.2	119
EP131A: Total Chlordane (sum)	----	0.01	µg/L	<0.010	----	----	----	----
EP131A: Sum of DDD + DDE + DDT	72-54-8/72-5 5-9/50-2	0.01	µg/L	<0.010	----	----	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 6107933)								
EP131B: Total Polychlorinated biphenyls	----	0.1	µg/L	<0.10	----	----	----	----
EP131B: Aroclor 1254	11097-69-1	----	µg/L	----	1 µg/L	98.4	51.0	133
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6107923)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	84.8	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	67.8	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	84.2	36.0	144
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	72.4	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	76.1	64.0	126
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	76.7	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	82.1	64.0	130

Sub-Matrix: **WATER**

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
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6107923) - continued								
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	79.7	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	80.4	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	78.4	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	73.5	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	78.0	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	77.9	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	62.1	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	74.0	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	79.7	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	75.6	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	76.4	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	64.8	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	75.6	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	75.5	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	78.9	66.0	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6110294)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.004 µg/L	85.2	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.004 µg/L	80.0	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.004 µg/L	82.8	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.004 µg/L	76.0	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.004 µg/L	106	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.004 µg/L	88.9	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.004 µg/L	105	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6110294)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	77.1	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	85.2	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	91.5	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	87.6	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	83.0	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	122	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	88.3	71.0	129
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	97.2	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	85.6	72.0	134

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6110294) - continued								
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	75.2	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.01 µg/L	118	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6110294)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	88.0	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	95.6	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	98.8	56.6	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	77.1	61.9	129
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	84.1	52.8	135
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	98.6	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	77.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6110294)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.004 µg/L	86.9	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.004 µg/L	90.3	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.004 µg/L	79.1	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.004 µg/L	79.2	60.9	136
EP231P: PFAS Sums (QCLot: 6110294)								
EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	µg/L	<0.0002	----	----	----	----
EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	----	----	----	----
EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	<0.0002	----	----	----	----
EP234A: OP Pesticides (QCLot: 6108739)								
EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	2.5 µg/L	116	70.0	130
EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	2.5 µg/L	104	70.0	130
EP234-1x: Formothion	2540-82-1	20	µg/L	<20	----	----	----	----
EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	2.5 µg/L	71.3	70.0	130
EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	2.5 µg/L	108	70.0	130
EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	2.5 µg/L	90.8	70.0	130
EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	2.5 µg/L	106	70.0	130
EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	2.5 µg/L	111	70.0	130
EP234A: OP Pesticides (QCLot: 6108740)								

Sub-Matrix: **WATER**

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
EP234A: OP Pesticides (QCLot: 6108740) - continued								
EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	0.2 µg/L	98.0	77.0	129
EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	0.2 µg/L	104	75.0	135
EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	1 µg/L	124	70.0	130
EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	0.2 µg/L	109	70.0	130
EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	0.2 µg/L	102	74.0	134
EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	0.2 µg/L	102	70.0	130
EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	2 µg/L	94.7	70.0	130
EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	0.1 µg/L	104	70.0	130
EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	0.05 µg/L	105	64.0	134
EP234-1: Demeton-O & Demeton-S	298-03-3/12 6-75-0	0.02	µg/L	<0.02	0.1 µg/L	104	79.0	127
EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	0.05 µg/L	102	63.0	135
EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	0.2 µg/L	107	70.0	128
EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	0.1 µg/L	101	68.0	138
EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	2 µg/L	120	76.0	128
EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	0.2 µg/L	92.6	75.0	127
EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	0.5 µg/L	108	72.0	134
EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	0.5 µg/L	86.2	70.0	130
EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	0.2 µg/L	103	70.0	130
EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	0.1 µg/L	97.0	78.0	128
EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	0.1 µg/L	102	71.0	135
EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	100 µg/L	125	70.0	130
EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	20 µg/L	107	64.0	136
EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	0.1 µg/L	97.6	79.0	125
EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	0.5 µg/L	93.8	70.0	130
EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	0.2 µg/L	94.6	70.0	130
EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	0.2 µg/L	101	77.0	123
EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	0.2 µg/L	98.0	75.0	129
EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	0.1 µg/L	96.1	74.0	130
EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	2 µg/L	88.4	69.0	139
EP234-1: Parathion-methyl	298-00-0	0.5	µg/L	<0.5	20 µg/L	69.9	66.0	140
EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	1 µg/L	98.6	68.0	136
EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	0.1 µg/L	98.7	70.0	130
EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	0.1 µg/L	102	71.0	137
EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	0.1 µg/L	102	70.0	130

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP234A: OP Pesticides (QCLot: 6108740) - continued								
EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	1 µg/L	98.3	70.0	130
EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	0.05 µg/L	107	71.0	137
EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	0.5 µg/L	99.3	70.0	130
EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	0.2 µg/L	95.6	70.0	130
EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	0.1 µg/L	99.1	70.0	130
EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	0.1 µg/L	102	74.0	128
EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	0.05 µg/L	101	77.0	131
EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	0.2 µg/L	121	70.0	130
EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	5 µg/L	129	63.0	139

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6110732)							
ES2432737-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	92.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	100	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	102	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	95.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	90.2	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6110731)							
ES2432737-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	97.1	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6108393)							
ES2432838-005	SED01_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	94.5	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6108392)							
ES2432838-005	SED01_0.1	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	99.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.4	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	87.2	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	98.0	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	87.5	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	103	70.0	130

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6108392)							
ES2432838-005	SED01_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	92.9	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	82.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	83.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	95.4	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	74.8	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6108390)							
ES2432838-005	SED01_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	101	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	105	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6108391)							
ES2432838-005	SED01_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	111	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	97.5	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	103	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6110004)							
ES2432661-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	69.2	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6108391)							
ES2432838-005	SED01_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	111	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	102	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	108	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6110004)							
ES2432661-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	62.4	61.1	142
EP080: BTEXN (QCLot: 6110004)							
ES2432661-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	83.9	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	84.0	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	84.4	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	85.4	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.7	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.7	61.1	115

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Acceptable Limits (%) Low	Acceptable Limits (%) High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6109845)							
EN2412524-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	71.6	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6109843)							
EN2412524-001	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	96.1	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 6112224)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 6112224) - continued							
EN2412386-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	99.7	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	96.9	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	99.8	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	109	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	83.8	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	98.2	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	101	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 6113145)							
EN2412631-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	99.7	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	93.8	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	92.4	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	93.7	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	90.0	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	91.7	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	95.4	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 6112223)							
EN2412386-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	91.8	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 6113144)							
EN2412631-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	93.0	70.0	130
EK055G: Ammonia as N by Discrete Analyser (QCLot: 6115687)							
EN2412386-002	Anonymous	EK055G: Ammonia as N	7664-41-7	0.5 mg/L	99.7	70.0	130
EK057G: Nitrite as N by Discrete Analyser (QCLot: 6109844)							
EN2412524-001	Anonymous	EK057G: Nitrite as N	14797-65-0	0.5 mg/L	112	70.0	130
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser (QCLot: 6115686)							
EN2412386-002	Anonymous	EK059G: Nitrite + Nitrate as N	----	0.5 mg/L	108	70.0	130
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser (QCLot: 6115683)							
EN2412386-003	Anonymous	EK061G: Total Kjeldahl Nitrogen as N	----	5 mg/L	88.3	70.0	130
EK067G: Total Phosphorus as P by Discrete Analyser (QCLot: 6115682)							
EN2412386-003	Anonymous	EK067G: Total Phosphorus as P	----	1 mg/L	91.1	70.0	130
EK071G: Reactive Phosphorus as P by discrete analyser (QCLot: 6109846)							
ES2432718-001	Anonymous	EK071G: Reactive Phosphorus as P	14265-44-2	0.5 mg/L	112	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116828)							
ES2433310-003	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	100	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116828)							
ES2433310-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	98.0	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 6116828)							
ES2433310-003	Anonymous	EP080: Benzene	71-43-2	25 µg/L	102	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	105	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	98.8	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	108	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	111	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	86.9	70.0	130
EP234A: OP Pesticides (QCLot: 6108739)							
EM2417230-001	Anonymous	EP234-1x: Acephate	30560-19-1	2.5 µg/L	93.3	70.0	130
		EP234-1x: Bensulide	741-58-2	2.5 µg/L	117	70.0	130
		EP234-1x: Fosetyl Aluminium	39148-24-8	2.5 µg/L	# 3.8	70.0	130
		EP234-1x: Methidathion	950-37-8	2.5 µg/L	98.3	70.0	130
		EP234-1x: Naftalofos	1491-41-4	2.5 µg/L	# 62.1	70.0	130
		EP234-1x: Pyrazophos	13457-18-6	2.5 µg/L	101	70.0	130
		EP234-1x: Thiometon	640-15-3	2.5 µg/L	# 38.1	70.0	130
EP234A: OP Pesticides (QCLot: 6108740)							
EM2417230-001	Anonymous	EP234-1: Azinphos-methyl	86-50-0	0.2 µg/L	86.8	70.0	130
		EP234-1: Azinphos-ethyl	2642-71-9	0.2 µg/L	92.2	70.0	130
		EP234-1: Bromophos-ethyl	4824-78-6	1 µg/L	# 144	70.0	130
		EP234-1: Carbofenothion	786-19-6	0.2 µg/L	95.9	70.0	130
		EP234-1: Chlorfenvinphos	470-90-6	0.2 µg/L	85.4	70.0	130
		EP234-1: Chlorpyrifos	2921-88-2	0.2 µg/L	87.7	70.0	130
		EP234-1: Chlorpyrifos-methyl	5598-13-0	2 µg/L	70.8	58.0	136
		EP234-1: Coumaphos	56-72-4	0.1 µg/L	99.4	70.0	130
		EP234-1: Demeton-O	298-03-3	0.05 µg/L	91.8	70.0	130
		EP234-1: Demeton-O & Demeton-S	298-03-3/126 -75-0	0.1 µg/L	86.4	69.0	129
		EP234-1: Demeton-S	126-75-0	0.05 µg/L	85.8	70.0	130
		EP234-1: Demeton-S-methyl	919-86-8	0.2 µg/L	72.2	70.0	130
		EP234-1: Diazinon	333-41-5	0.1 µg/L	91.9	70.0	130
		EP234-1: Dichlorvos	62-73-7	2 µg/L	106	70.0	130
		EP234-1: Dimethoate	60-51-5	0.2 µg/L	75.7	69.0	131
		EP234-1: Disulfoton	298-04-4	0.5 µg/L	89.2	70.0	130
		EP234-1: EPN	2104-64-5	0.5 µg/L	# 60.9	70.0	130
		EP234-1: Ethion	563-12-2	0.2 µg/L	97.6	70.0	130
		EP234-1: Ethoprophos	13194-48-4	0.1 µg/L	89.5	70.0	132
		EP234-1: Fenamiphos	22224-92-6	0.1 µg/L	94.9	70.0	130
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	100 µg/L	92.0	71.0	133
		EP234-1: Fenitrothion	122-14-5	20 µg/L	66.6	64.0	136

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP234A: OP Pesticides (QCLot: 6108740) - continued							
EM2417230-001	Anonymous	EP234-1: Fensulfothion	115-90-2	0.1 µg/L	99.0	83.0	123
		EP234-1: Fenthion	55-38-9	0.5 µg/L	92.7	70.0	130
		EP234-1: Malathion	121-75-5	0.2 µg/L	85.4	70.0	130
		EP234-1: Mevinphos	7786-34-7	0.2 µg/L	98.2	69.0	125
		EP234-1: Monocrotophos	6923-22-4	0.2 µg/L	# 54.4	70.0	128
		EP234-1: Omethoate	1113-02-6	0.1 µg/L	83.4	70.0	130
		EP234-1: Parathion	56-38-2	2 µg/L	# 64.2	70.0	130
		EP234-1: Parathion-methyl	298-00-0	20 µg/L	# 43.2	70.0	140
		EP234-1: Phorate	298-02-2	1 µg/L	85.4	70.0	130
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.1 µg/L	90.3	70.0	130
		EP234-1: Pirimiphos-methyl	29232-93-7	0.1 µg/L	86.4	70.0	130
		EP234-1: Profenofos	41198-08-7	0.1 µg/L	86.4	70.0	130
		EP234-1: Prothiofos	34643-46-4	1 µg/L	98.6	70.0	130
		EP234-1: Sulfotep	3689-24-5	0.05 µg/L	87.4	63.0	135
		EP234-1: Sulprofos	35400-43-2	0.5 µg/L	90.5	70.0	130
		EP234-1: Temephos	3383-96-8	0.2 µg/L	98.4	70.0	130
		EP234-1: Terbufos	13071-79-9	0.1 µg/L	80.5	70.0	130
		EP234-1: Tetrachlorvinphos	22248-79-9	0.1 µg/L	90.0	77.0	125
		EP234-1: Triazophos	24017-47-8	0.05 µg/L	88.0	74.0	132
		EP234-1: Trichlorfon	52-68-6	0.2 µg/L	130	70.0	130
		EP234-1: Trichloronate	327-98-0	5 µg/L	139	63.0	139

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2432838**	Page	: 1 of 16
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001633 Jordan Springs HS	Date Samples Received	: 09-Oct-2024
Site	: ----	Issue Date	: 15-Oct-2024
Sampler	: ----	No. of samples received	: 24
Order number	: 305001633	No. of samples analysed	: 10

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.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Bromophos-ethyl**	4824-78-6	144 %	70.0-130%	**Recovery greater than upper data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**EPN**	2104-64-5	60.9 %	70.0-130%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Monocrotophos**	6923-22-4	54.4 %	70.0-128%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Parathion**	56-38-2	64.2 %	70.0-130%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Parathion-methyl**	298-00-0	43.2 %	70.0-140%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Fosetyl Aluminium**	39148-24-8	3.8 %	70.0-130%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Naftalofos**	1491-41-4	62.1 %	70.0-130%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	EM2417230--001	Anonymous	**Thiometon**	640-15-3	38.1 %	70.0-130%	**Recovery less than lower data quality objective**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Organochlorine Pesticides (Ultra-trace)	EP131A	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Organochlorine Pesticides (Ultra-trace)	EP131A	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	7	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **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) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**----**	----	**----**	**10-Oct-2024**	22-Oct-2024	✓
Soil Glass Jar - Unpreserved (EA055) QA200	**09-Oct-2024**	**----**	----	**----**	**10-Oct-2024**	23-Oct-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**10-Oct-2024**	06-Apr-2025	✓
Soil Glass Jar - Unpreserved (EG005T) QA200	**09-Oct-2024**	**10-Oct-2024**	07-Apr-2025	✓	**10-Oct-2024**	07-Apr-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	05-Nov-2024	✓	**11-Oct-2024**	05-Nov-2024	✓
Soil Glass Jar - Unpreserved (EG035T) QA200	**09-Oct-2024**	**10-Oct-2024**	06-Nov-2024	✓	**11-Oct-2024**	06-Nov-2024	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**10-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP066) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**10-Oct-2024**	19-Nov-2024	✓

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) SED01_0.1, SED03_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**10-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**11-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**11-Oct-2024**	19-Nov-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) SED01_0.1, SED03_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**10-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**11-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**11-Oct-2024**	19-Nov-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**14-Oct-2024**	19-Nov-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**12-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	22-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP071) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**12-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**14-Oct-2024**	23-Oct-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**12-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	22-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP071) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**12-Oct-2024**	19-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**14-Oct-2024**	23-Oct-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) SED01_0.1, SED03_0.1, SED05_0.1 - received as SED05_0.2, SED07_0.15, SED09_0.1	**08-Oct-2024**	**10-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	22-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080) QA200	**09-Oct-2024**	**10-Oct-2024**	23-Oct-2024	✓	**14-Oct-2024**	23-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED037P: Alkalinity by PC Titrator							
Clear Plastic Bottle - Natural (ED037-P) SW01, SW02, SW03	**08-Oct-2024**	**----**	----	----	**09-Oct-2024**	22-Oct-2024	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Clear Plastic Bottle - Natural (ED041G) SW01, SW02, SW03	**08-Oct-2024**	**----**	----	----	**10-Oct-2024**	05-Nov-2024	✓
ED045G: Chloride by Discrete Analyser							
Clear Plastic Bottle - Natural (ED045G) SW01, SW02, SW03	**08-Oct-2024**	**----**	----	----	**10-Oct-2024**	05-Nov-2024	✓
ED093F: Dissolved Major Cations							
Clear Plastic Bottle - Nitric Acid; Filtered (ED093F) SW01, SW02, SW03	**08-Oct-2024**	**----**	----	----	**10-Oct-2024**	05-Nov-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
SW01, SW02, SW03	08-Oct-2024	----	----	----	10-Oct-2024	06-Apr-2025	✓
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
QA100	08-Oct-2024	----	----	----	11-Oct-2024	06-Apr-2025	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
SW01, SW02, SW03, QA100	08-Oct-2024	----	----	----	12-Oct-2024	05-Nov-2024	✓
EK055G: Ammonia as N by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK055G)							
SW01, SW02, SW03, QA100	08-Oct-2024	----	----	----	12-Oct-2024	05-Nov-2024	✓
EK057G: Nitrite as N by Discrete Analyser							
Clear Plastic Bottle - Natural (EK057G)							
SW01, SW02, SW03, QA100	08-Oct-2024	----	----	----	10-Oct-2024	10-Oct-2024	✓
EK059G: Nitrite plus Nitrate as N (NOx) by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK059G)							
SW01, SW02, SW03, QA100	08-Oct-2024	----	----	----	12-Oct-2024	05-Nov-2024	✓
EK061G: Total Kjeldahl Nitrogen By Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK061G)							
SW01, SW02, SW03, QA100	08-Oct-2024	12-Oct-2024	05-Nov-2024	✓	12-Oct-2024	05-Nov-2024	✓
EK067G: Total Phosphorus as P by Discrete Analyser							
Clear Plastic Bottle - Sulfuric Acid (EK067G)							
SW01, SW02, SW03, QA100	08-Oct-2024	12-Oct-2024	05-Nov-2024	✓	12-Oct-2024	05-Nov-2024	✓
EK071G: Reactive Phosphorus as P by discrete analyser							
Clear Plastic Bottle - Natural (EK071G)							
SW01, SW02, SW03, QA100	08-Oct-2024	----	----	----	10-Oct-2024	10-Oct-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
SW01, SW02, SW03, QA100	08-Oct-2024	09-Oct-2024	15-Oct-2024	✓	10-Oct-2024	18-Nov-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SW01, SW02, SW03, QA100	08-Oct-2024	14-Oct-2024	22-Oct-2024	✓	14-Oct-2024	22-Oct-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**09-Oct-2024**	15-Oct-2024	✓	**10-Oct-2024**	18-Nov-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**14-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	22-Oct-2024	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**14-Oct-2024**	22-Oct-2024	✓	**14-Oct-2024**	22-Oct-2024	✓
EP131A: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved (EP131A)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**09-Oct-2024**	15-Oct-2024	✓	**10-Oct-2024**	18-Nov-2024	✓
EP131B: Polychlorinated Biphenyls (as Aroclors)							
Amber Glass Bottle - Unpreserved (EP131B)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**09-Oct-2024**	15-Oct-2024	✓	**10-Oct-2024**	18-Nov-2024	✓
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**09-Oct-2024**	15-Oct-2024	✓	**10-Oct-2024**	18-Nov-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-SUT)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**11-Oct-2024**	06-Apr-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-SUT)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**11-Oct-2024**	06-Apr-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-SUT)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**11-Oct-2024**	06-Apr-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-SUT)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**11-Oct-2024**	06-Apr-2025	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-SUT)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**10-Oct-2024**	06-Apr-2025	✓	**11-Oct-2024**	06-Apr-2025	✓
EP234A: OP Pesticides							
Amber Glass Bottle - Unpreserved (EP234-1x)							
SW01, SW02, SW03, QA100	**08-Oct-2024**	**----**	----	----	**15-Oct-2024**	15-Oct-2024	✓

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	16	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	3	26	**11.54**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	3	28	**10.71**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	2	8	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	2	14	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Ammonia as N by Discrete analyser	EK055G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	28	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	3	20	**15.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	3	20	**15.00**	**15.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Control Samples (LCS) - Continued							
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Ammonia as N by Discrete analyser	EK055G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	28	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**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	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Ammonia as N by Discrete analyser	EK055G	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	26	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	28	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Nitrite as N by Discrete Analyser	EK057G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	0	7	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Reactive Phosphorus as P-By Discrete Analyser	EK071G	1	14	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Phosphorus as P By Discrete Analyser	EK067G	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	4	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.

Analytical Methods	Method	Matrix	Method Descriptions
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ammonia as N by Discrete analyser	EK055G	WATER	In house: Referenced to APHA 4500-NH3 G Ammonia is determined by direct colorimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrite as N by Discrete Analyser	EK057G	WATER	In house: Referenced to APHA 4500-NO2- B. Nitrite is determined by direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Nitrate as N by Discrete Analyser	EK058G	WATER	In house: Referenced to APHA 4500-NO3- F. Nitrate is reduced to nitrite by way of a chemical reduction followed by quantification by Discrete Analyser. Nitrite is determined seperately by direct colourimetry and result for Nitrate calculated as the difference between the two results. This method is compliant with NEPM Schedule B(3)
Nitrite and Nitrate as N (NOx) by Discrete Analyser	EK059G	WATER	In house: Referenced to APHA 4500-NO3- F. Combined oxidised Nitrogen (NO2+NO3) is determined by Chemical Reduction and direct colourimetry by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Total Kjeldahl Nitrogen as N By Discrete Analyser	EK061G	WATER	In house: Referenced to APHA 4500-Norg D (In house). An aliquot of sample is digested using a high temperature Kjeldahl digestion to convert nitrogenous compounds to ammonia. Ammonia is determined colorimetrically by discrete analyser. This method is compliant with NEPM Schedule B(3)
Total Nitrogen as N (TKN + Nox) By Discrete Analyser	EK062G	WATER	In house: Referenced to APHA 4500-Norg / 4500-NO3-. This method is compliant with NEPM Schedule B(3)
Total Phosphorus as P By Discrete Analyser	EK067G	WATER	In house: Referenced to APHA 4500-P H, Jirka et al, Zhang et al. This procedure involves sulphuric acid digestion of a sample aliquot to break phosphorus down to orthophosphate. The orthophosphate reacts with ammonium molybdate and antimony potassium tartrate to form a complex which is then reduced and its concentration measured at 880nm using discrete analyser. This method is compliant with NEPM Schedule B(3)
Reactive Phosphorus as P-By Discrete Analyser	EK071G	WATER	In house: Referenced to APHA 4500-P F Ammonium molybdate and potassium antimonyl tartrate reacts in acid medium with othophosphate to form a heteropoly acid -phosphomolybdic acid - which is reduced to intensely coloured molybdenum blue by ascorbic acid. Quantification is by Discrete Analyser. This method is compliant with NEPM Schedule B(3)
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Organochlorine Pesticides (Ultra-trace)	EP131A	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/µECD/uECD). This method is compliant with NEPM Schedule B(3)
PCB's (Ultra-trace)	EP131B	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/µECD/µECD). This method is compliant with NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is concentrated, combined with an equal volume of reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.

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.
TKN/TP Digestion	EK061/EK067	WATER	In house: Referenced to APHA 4500 Norg - D; APHA 4500 P - H. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	In house: Referenced to USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an apporpriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

COC updated - 18/10/24, 1114

363839

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						
QC101		GJ, PJ	10.10.24	Chill		X	X	X										
QC102		GJ, PJ	10.10.24	Chill		X	X	X										Sample sent from ALS 18/10/2024. Expected to be received by Envirolab 18/10/2024 or 19/10/2024
					Total	2	2	2	0	0	0	0	0	0	0	0	0	

Relinquished by: (name / company)	Michael Koerner Stantec	Received by: (name / company)		Relinquished by: (name / company)		Received by: (name / company)	ELS SYD Sarah P
Date & Time:	18/10/2024 10:12	Date & Time:		Date & Time:		Date & Time:	14/10/24, 1250
Signature:	MK	Signature:		Signature:		Signature:	

ENVIROLAB GROUP

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

Job No: 363839

Date Received: 14/10/24
Time Received: 1250
Received By: SP/ST
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0470 976 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):		Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Subcon / Forward QuB / Split WO

Lab / Analysis:

Organised By / Date:

Relinquished By / Date:

Connote / Courier:

WO No: ES2433214

Attached By PO / Internal Sheet:

Please freeze ASS samples

	Sample information						Analysis Required															
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH FieldFox	Hold									
1	BH01	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X												
2	BH01	1	GJ, PJ, ACM Bag	10.10.24	Chill								X									
3	BH01	1.5	GJ, PJ, ACM Bag	10.10.24	Chill								X									
4	BH01	1.8	GJ, PJ, ACM Bag	10.10.24	Chill		X			X												
5	BH01	2.5	GJ	10.10.24	Chill								X									
6	BH01	3	GJ, PJ, ACM Bag	10.10.24	Chill								X									
7	BH01	3.3	GJ, PJ, ACM Bag	10.10.24	Chill								X									
8	BH01	3.8	GJ	10.10.24	Chill		X					X										
9	BH01	4.3	GJ, PJ, ACM Bag	10.10.24	Chill							X										
10	BH01	5	GJ, PJ, ASS Bag	10.10.24	Chill							X										
11	BH01	5.5	ASS Bag	10.10.24	Chill							X										
12	BH01	6	GJ, PJ, ASS Bag	10.10.24	Chill							X										
13	BH01	6.5	GJ, ASS Bag	10.10.24	Chill							X										
14	BH01	7	GJ, ASS Bag	10.10.24	Chill							X										
15	QA101		GJ, PJ	10.10.24	Chill		X	X	X													
16	QC101		GJ, PJ	10.10.24	Chill								X									
17	BH02	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X									
18	BH02	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X									
19	BH02	1	GJ, PJ, ACM Bag	10.10.24	Chill								X									
20	BH02	2	GJ, PJ, ACM Bag	10.10.24	Chill		X															
21	BH02	3	GJ, PJ, ACM Bag	10.10.24	Chill								X									
22	BH02	3.8	GJ, PJ	10.10.24	Chill								X									

Environmental Division
Sydney
Work Order Reference
ES2433214

Telephone : +61-2-8784 8555

Please forward to Envirolab

Rec: 11/10/24 1355

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0478 976 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 569	Project Specific Quote No. :	ES24MWHAUS0066
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

	Sample Information					Analysis Required														Comments
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH: Field/Fox	Hold								Please freeze ASS samples
23	BH02	4	GJ, PJ	10.10.24	Chill		X			X										
24	BH02	4.3	GJ, PJ	10.10.24	Chill								X							
25	BH02	4.7	GJ, PJ, ASS Bag	10.10.24	Chill		X													
26	BH02	5	ASS Bag	10.10.24	Chill								X							
27	BH02	5.5	ASS Bag	10.10.24	Chill								X							
28	BH02	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
29	BH03	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
30	BH03	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
31	BH03	1	GJ, PJ	10.10.24	Chill								X							
32	BH03	1.5	GJ, PJ	10.10.24	Chill								X							
33	BH03	2.2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
34	BH03	3	GJ, PJ, ASS Bag	10.10.24	Chill								X							
35	BH03	4	GJ, PJ, ASS Bag	10.10.24	Chill		X	X	X	X										
36	BH03	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
37	BH03	5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
38	BH03	5.5	ASS Bag	10.10.24	Chill							X								
39	BH03	6	GJ, PJ, ASS Bag	10.10.24	Chill						X	X								
40	BH03	6.5	ASS Bag	10.10.24	Chill		X		X			X								
41	BH03	7	ASS Bag	10.10.24	Chill							X								
42	BH03	7.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
43	BH202	1	GJ	10.10.24	Chill		X	X												
44	BH202	2	GJ	10.10.24	Chill								X							

Rec: [illegible]
11/10/24
1355

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Keemer	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 772	Project Number:	305001663
Alternative Contact:	Pam Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / PT	Date results required:	Standard
Email Address (results and invoice):	michael.keemer@stantec.com; finance@stantec.com	Report format:	ESDAT: Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

	Sample Information					Analysis Required														Comments
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold								Please freeze ASS samples
45	BH202	3	GJ	10.10.24	Chill								X							
46	BH202	5	ASS Bag	10.10.24	Chill							X								
47	BH202	6	ASS Bag	10.10.24	Chill							X								
48	BH202	8.5	ASS Bag	10.10.24	Chill							X								
49	BH04	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X										
50	BH04	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
51	BH04	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
52	BH04	2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
53	BH04	3	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
54	BH04	4	GJ, PJ, ACM Bag	10.10.24	Chill								X							
55	BH04	5	GJ, PJ, ASS Bag	10.10.24	Chill		X		X		X	X								
56	BH04	5.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
57	BH04	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
58	BH05	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X										
59	BH05	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
60	BH05	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
61	BH05	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
62	BH05	3.8	GJ, PJ	10.10.24	Chill								X							
63	BH05	4.3	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X								
64	BH05	4.5	ASS Bag	10.10.24	Chill							X								
65	BH05	5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
66	BH05	5.5	ASS Bag	10.10.24	Chill							X								

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SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Kosmer	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 770	Project Number:	305501663
Alternative Contact:	Finn Tansh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 569	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.kosmer@stantec.com; finn.tansh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required													Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH05	6	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH06	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
BH06	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH06	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	4	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	5.5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
QA102		GJ, PJ	10.10.24	Chill		X	X	X											
QC102		GJ, PJ	10.10.24	Chill								X							
BH07	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH07	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	1.5	GJ, PJ, ACM Bag	10.10.24	Chill		X		X	X										
BH07	2.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	4	GJ, PJ	10.10.24	Chill								X							

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0475 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS6006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH07	5	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X								
BH07	5.5	ASS Bag	10.10.24	Chill							X								
BH07	6	GJ, ASS Bag	10.10.24	Chill							X								
BH09	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
BH09	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH09	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH09	2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH09	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH09	3.8	GJ, PJ	10.10.24	Chill		X				X									
BH09	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X	X							
BH09	5	GJ, ASS Bag	10.10.24	Chill							X	X							
BH09	5.5	GJ, ASS Bag	10.10.24	Chill							X	X							
BH09	6	ASS Bag	10.10.24	Chill							X	X							
					Total:	25	10	0	14	5	21	51	0	0	0				

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Relinquished by: (name / company)	Michael Koerner Stantec	Relinquished by: (name / company)	
Date & Time:	11/10/2024 11:36	Date & Time:	
Signature:	MK	Signature:	
Received by: (name / company)		Received by: (name / company)	WBS / ALS
Date & Time:		Date & Time:	11/10/24 1355
Signature:		Signature:	

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2433214**		
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: michael.koerner@cardno.com.au	E-mail	: khaleda.ataei@alsglobal.com
Telephone	: ----	Telephone	: + 61 2 8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Page	: 1 of 5
Order number	: ----	Quote number	: ES2024MWHAUS0006 (ES24MWHAUS0006)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jordan Springs, NSW		
Sampler	: MK / FT		

Dates

Date Samples Received	: 11-Oct-2024 14:33	Issue Date	: 11-Oct-2024
Client Requested Due Date	: 22-Oct-2024	Scheduled Reporting Date	: **22-Oct-2024**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 6	Temperature	: 2.4'C, 0.8'C & 1.6'C - Ice present
Receipt Detail	: 2 BAG	No. of samples received / analysed	: 101 / 50

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Sample ID QC101 will be forwarded to Enivrolab as per COC.
- Sample ID BH04_2 & BH04_3 was not received.
- Unable to conduct pH/Fox analysis on sample 8 & 9 as a separate bag was not received.
- Unable to conduct TRH/BTEX/PAH 8 Metals & OC/OP/PCB analysis on sample 68 as the soil glass jar was not received.
- Unable to conduct Asbestos analysis on sample 23, 29 & 35 as a separate bag was not received.
- Unable to conduct TRH/BTEX/PAH 8 Metals & PFAS analysis as the soil glass and pfas plastic jar was not received.
- Sample 99-103 received as extra.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433214-001	10-Oct-2024 00:00	BH01_0.5			✓	✓	✓	✓	✓
ES2433214-002	10-Oct-2024 00:00	BH01_1	✓						
ES2433214-003	10-Oct-2024 00:00	BH01_1.5	✓						
ES2433214-004	10-Oct-2024 00:00	BH01_1.8			✓	✓			✓
ES2433214-005	10-Oct-2024 00:00	BH01_2.5	✓						
ES2433214-006	10-Oct-2024 00:00	BH01_3	✓						
ES2433214-007	10-Oct-2024 00:00	BH01_3.3	✓						
ES2433214-008	10-Oct-2024 00:00	BH01_3.8			✓				✓
ES2433214-009	10-Oct-2024 00:00	BH01_4.3	✓						
ES2433214-010	10-Oct-2024 00:00	BH01_5		✓					
ES2433214-011	10-Oct-2024 00:00	BH01_5.5		✓					
ES2433214-012	10-Oct-2024 00:00	BH01_6		✓					
ES2433214-013	10-Oct-2024 00:00	BH01_6.5		✓					
ES2433214-014	10-Oct-2024 00:00	BH01_7		✓					
ES2433214-015	10-Oct-2024 00:00	QA101			✓		✓	✓	✓
ES2433214-017	10-Oct-2024 00:00	BH02_0.1	✓						
ES2433214-018	10-Oct-2024 00:00	BH02_0.5	✓						
ES2433214-019	10-Oct-2024 00:00	BH02_1	✓						
ES2433214-020	10-Oct-2024 00:00	BH02_2			✓				✓
ES2433214-021	10-Oct-2024 00:00	BH02_3	✓						
ES2433214-022	10-Oct-2024 00:00	BH02_3.8	✓						
ES2433214-023	10-Oct-2024 00:00	BH02_4			✓				✓
ES2433214-024	10-Oct-2024 00:00	BH02_4.3	✓						
ES2433214-025	10-Oct-2024 00:00	BH02_4.7			✓				✓
ES2433214-026	10-Oct-2024 00:00	BH02_5	✓						
ES2433214-027	10-Oct-2024 00:00	BH02_5.5	✓						
ES2433214-028	10-Oct-2024 00:00	BH02_6	✓						
ES2433214-029	10-Oct-2024 00:00	BH03_0.1			✓			✓	✓
ES2433214-030	10-Oct-2024 00:00	BH03_0.5	✓						
ES2433214-031	10-Oct-2024 00:00	BH03_1	✓						
ES2433214-032	10-Oct-2024 00:00	BH03_1.5	✓						
ES2433214-033	10-Oct-2024 00:00	BH03_2.2	✓						
ES2433214-034	10-Oct-2024 00:00	BH03_3	✓						
ES2433214-035	10-Oct-2024 00:00	BH03_4			✓		✓	✓	✓
ES2433214-036	10-Oct-2024 00:00	BH03_4.5		✓					

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433214-037	10-Oct-2024 00:00	BH03_5		✓					
ES2433214-038	10-Oct-2024 00:00	BH03_5.5		✓					
ES2433214-039	10-Oct-2024 00:00	BH03_6		✓	✓				
ES2433214-040	10-Oct-2024 00:00	BH03_6.5		✓					
ES2433214-041	10-Oct-2024 00:00	BH03_7		✓					
ES2433214-042	10-Oct-2024 00:00	BH03_7.5		✓					
ES2433214-043	10-Oct-2024 00:00	BH202_1			✓			✓	✓
ES2433214-044	10-Oct-2024 00:00	BH202_2	✓						
ES2433214-045	10-Oct-2024 00:00	BH202_3	✓						
ES2433214-046	10-Oct-2024 00:00	BH202_5		✓					
ES2433214-047	10-Oct-2024 00:00	BH202_6		✓					
ES2433214-048	10-Oct-2024 00:00	BH202_8.5		✓					
ES2433214-049	10-Oct-2024 00:00	BH04_0.1			✓	✓	✓	✓	✓
ES2433214-050	10-Oct-2024 00:00	BH04_0.5	✓						
ES2433214-051	10-Oct-2024 00:00	BH04_1	✓						
ES2433214-053	10-Oct-2024 00:00	BH04_3			✓	✓			✓
ES2433214-054	10-Oct-2024 00:00	BH04_4	✓						
ES2433214-055	10-Oct-2024 00:00	BH04_5		✓	✓		✓		✓
ES2433214-056	10-Oct-2024 00:00	BH04_5.5		✓					
ES2433214-057	10-Oct-2024 00:00	BH04_6	✓						
ES2433214-058	10-Oct-2024 00:00	BH05_0.5			✓	✓	✓	✓	✓
ES2433214-059	10-Oct-2024 00:00	BH05_1	✓						
ES2433214-060	10-Oct-2024 00:00	BH05_2			✓	✓			✓
ES2433214-061	10-Oct-2024 00:00	BH05_3	✓						
ES2433214-062	10-Oct-2024 00:00	BH05_3.8	✓						
ES2433214-063	10-Oct-2024 00:00	BH05_4.3		✓	✓				✓
ES2433214-064	10-Oct-2024 00:00	BH05_4.5		✓					
ES2433214-065	10-Oct-2024 00:00	BH05_5		✓					
ES2433214-066	10-Oct-2024 00:00	BH05_5.5		✓					
ES2433214-067	10-Oct-2024 00:00	BH05_6		✓					
ES2433214-068	10-Oct-2024 00:00	BH06_0.1				✓			
ES2433214-069	10-Oct-2024 00:00	BH06_0.5	✓						
ES2433214-070	10-Oct-2024 00:00	BH06_1	✓						
ES2433214-071	10-Oct-2024 00:00	BH06_2			✓	✓			✓
ES2433214-072	10-Oct-2024 00:00	BH06_3	✓						
ES2433214-073	10-Oct-2024 00:00	BH06_4	✓						
ES2433214-074	10-Oct-2024 00:00	BH06_5	✓						
ES2433214-075	10-Oct-2024 00:00	BH06_5.5	✓						
ES2433214-076	10-Oct-2024 00:00	BH06_6	✓						
ES2433214-077	10-Oct-2024 00:00	QA102			✓		✓	✓	✓
ES2433214-078	10-Oct-2024 00:00	QC102	✓						

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433214-079	10-Oct-2024 00:00	BH07_0.1	✓						
ES2433214-080	10-Oct-2024 00:00	BH07_0.5			✓	✓			✓
ES2433214-081	10-Oct-2024 00:00	BH07_1	✓						
ES2433214-082	10-Oct-2024 00:00	BH07_1.5			✓	✓	✓		✓
ES2433214-083	10-Oct-2024 00:00	BH07_2.5	✓						
ES2433214-084	10-Oct-2024 00:00	BH07_3	✓						
ES2433214-085	10-Oct-2024 00:00	BH07_4	✓						
ES2433214-086	10-Oct-2024 00:00	BH07_5		✓	✓				✓
ES2433214-087	10-Oct-2024 00:00	BH07_5.5		✓					
ES2433214-088	10-Oct-2024 00:00	BH07_6		✓					
ES2433214-089	10-Oct-2024 00:00	BH09_0.1			✓	✓		✓	✓
ES2433214-090	10-Oct-2024 00:00	BH09_0.5	✓						
ES2433214-091	10-Oct-2024 00:00	BH09_1	✓						
ES2433214-092	10-Oct-2024 00:00	BH09_2	✓						
ES2433214-093	10-Oct-2024 00:00	BH09_3	✓						
ES2433214-094	10-Oct-2024 00:00	BH09_3.8			✓				✓
ES2433214-095	10-Oct-2024 00:00	BH09_4.5		✓					
ES2433214-096	10-Oct-2024 00:00	BH09_5		✓					
ES2433214-097	10-Oct-2024 00:00	BH09_5.5		✓					
ES2433214-098	10-Oct-2024 00:00	BH09_6		✓					
ES2433214-099	10-Oct-2024 00:00	BH04_4.5	✓						
ES2433214-100	10-Oct-2024 00:00	BH04_2.5	✓						
ES2433214-101	10-Oct-2024 00:00	BH04_2.8	✓						
ES2433214-102	10-Oct-2024 00:00	BH04_3.4	✓						
ES2433214-103	10-Oct-2024 00:00	BH01_4.5	✓						

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOIL - EP074 (solids) minus BTEXN Volatile Organic Compounds (minus BTEXN)	SOIL - EP074 (solids) Volatile Organic Compounds
ES2433214-039	10-Oct-2024 00:00	BH03_6		✓
ES2433214-055	10-Oct-2024 00:00	BH04_5	✓	
ES2433214-063	10-Oct-2024 00:00	BH05_4.3	✓	
ES2433214-086	10-Oct-2024 00:00	BH07_5	✓	

			SOIL - EP074 (solids) minus BTEXN Volatile Organic Compounds (minus BTEXN)	SOIL - EP074 (solids) Volatile Organic Compounds
ES2433214-094	10-Oct-2024 00:00	BH09_3.8	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS ADDRESS

- A4 - AU Tax Invoice (INV)	Email	sapinvoices@stantec.com

Brock Collinson

- *AU Certificate of Analysis - NATA (COA)	Email	brock.collinson@cardno.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	brock.collinson@cardno.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	brock.collinson@cardno.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	brock.collinson@cardno.com.au
- Chain of Custody (CoC) (COC)	Email	brock.collinson@cardno.com.au
- EDI Format - ESDAT (ESDAT)	Email	brock.collinson@cardno.com.au
- EDI Format - XTab (XTAB)	Email	brock.collinson@cardno.com.au

MICHAEL KOERNER

- *AU Certificate of Analysis - NATA (COA)	Email	michael.koerner@cardno.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	michael.koerner@cardno.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	michael.koerner@cardno.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	michael.koerner@cardno.com.au
- Chain of Custody (CoC) (COC)	Email	michael.koerner@cardno.com.au
- EDI Format - ESDAT (ESDAT)	Email	michael.koerner@cardno.com.au
- EDI Format - XTab (XTAB)	Email	michael.koerner@cardno.com.au

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EA037: Ass Field Screening Analysis

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

CERTIFICATE OF ANALYSIS

Work Order	: **ES2433214**	Page	: 1 of 66
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024 14:33
Order number	: ----	Date Analysis Commenced	: 14-Oct-2024
C-O-C number	: ----	Issue Date	: 17-Oct-2024 17:08
Sampler	: MK / FT		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 100		
No. of samples analysed	: 49		

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*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Layla Hafner	Acid Sulphate Soils - Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

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.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- ASS: EA003 (NATA Field and F(ox) screening): pH F(ox) Reaction Rate: 1 - Slight; 2 - Moderate; 3 - Strong; 4 - Extreme
- 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.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where LISTED. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	----	----	6.3	6.4
pH (Fox)	----	0.1	pH Unit	----	----	----	4.4	4.4
Reaction Rate	----	1	Reaction Unit	----	----	----	2	3
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	8.6	16.2	11.8	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	----	----	----
Asbestos (Trace)	1332-21-4	-	-	No	No	----	----	----
Asbestos Type	1332-21-4	-	--	-	-	----	----	----
Synthetic Mineral Fibre	----	-	--	No	No	----	----	----
Organic Fibre	----	-	--	No	No	----	----	----
Sample weight (dry)	----	0.01	g	184	210	----	----	----
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	9	13	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	24	17	12	----	----
Copper	7440-50-8	5	mg/kg	26	26	29	----	----
Lead	7439-92-1	5	mg/kg	19	19	17	----	----
Nickel	7440-02-0	2	mg/kg	17	16	22	----	----
Zinc	7440-66-6	5	mg/kg	89	60	101	----	----
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	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<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	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
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	<0.5	----	----
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	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	----
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		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<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		<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
				Result	Result	Result	Result	Result
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	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_0.5	BH01_1.8	BH01_3.8	BH01_4.3	BH01_5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-001	ES2433214-004	ES2433214-008	ES2433214-009	ES2433214-010
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		91.2	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		94.1	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		94.3	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		98.8	103	93.4	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		97.2	97.9	99.5	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		84.8	86.6	86.0	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		102	99.8	101	----	----
Anthracene-d10	1719-06-8	0.5	%		108	106	108	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		107	106	107	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		83.2	74.8	70.4	----	----
Toluene-D8	2037-26-5	0.2	%		89.0	80.8	76.0	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		86.0	94.5	78.0	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		95.6	----	----	----	----
13C8-PFOA	----	0.0002	%		99.4	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	6.6	6.1	6.1	5.9	----
pH (Fox)	----	0.1	pH Unit	4.4	4.4	7.0	5.2	----
Reaction Rate	----	1	Reaction Unit	3	2	4	2	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	----	----	9.0
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	----	----	6
Cadmium	7440-43-9	1	mg/kg	----	----	----	----	<1
Chromium	7440-47-3	2	mg/kg	----	----	----	----	16
Copper	7440-50-8	5	mg/kg	----	----	----	----	34
Lead	7439-92-1	5	mg/kg	----	----	----	----	18
Nickel	7440-02-0	2	mg/kg	----	----	----	----	22
Zinc	7440-66-6	5	mg/kg	----	----	----	----	86
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	----	----	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	----	----	----	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	----	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
trans-Chlordane	5103-74-2	0.05	mg/kg		----	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	----	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		----	----	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		----	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg		----	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	----	----	----	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		----	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		----	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		----	----	----	----	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		----	----	----	----	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		----	----	----	----	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	----	----	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	----	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		----	----	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg		----	----	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg		----	----	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	----	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		----	----	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg		----	----	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg		----	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	----	----	----	<0.05
Parathion	56-38-2	0.2	mg/kg		----	----	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	----	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	----	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	----	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		----	----	----	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		----	----	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg		----	----	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		----	----	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		----	----	----	----	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	----	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	----	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	----	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg		----	----	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg		----	----	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	----	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	----	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	----	----	<10
C10 - C14 Fraction	----	50	mg/kg		----	----	----	----	<50
C15 - C28 Fraction	----	100	mg/kg		----	----	----	----	<100
C29 - C36 Fraction	----	100	mg/kg		----	----	----	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	----	<10
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	----	<100
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	----	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg		----	----	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	----	<0.2
^ Total Xylenes	----	0.5	mg/kg		----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
Naphthalene	91-20-3	1	mg/kg	----	----	----	----	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	----	----	----	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	----	----	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	----	<0.0002
EP066S: PCB Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5.5	BH01_6	BH01_6.5	BH01_7	QA101
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-011	ES2433214-012	ES2433214-013	ES2433214-014	ES2433214-015
				Result	Result	Result	Result	Result
EP066S: PCB Surrogate - Continued								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	78.0
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	----	----	113
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	----	----	101
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	----	----	104
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	----	----	97.6
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	----	----	85.0
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	----	----	99.3
Anthracene-d10	1719-06-8	0.5	%	----	----	----	----	108
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	----	----	106
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	----	----	74.8
Toluene-D8	2037-26-5	0.2	%	----	----	----	----	78.4
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	----	----	77.2
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	----	----	----	100
13C8-PFOA	----	0.0002	%	----	----	----	----	109

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		13.2	13.2	16.2	10.8	12.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		----	----	----	No	----
Asbestos (Trace)	1332-21-4	-	-		----	----	----	No	----
Asbestos Type	1332-21-4	-	--		----	----	----	-	----
Synthetic Mineral Fibre	----	-	--		----	----	----	No	----
Organic Fibre	----	-	--		----	----	----	No	----
Sample weight (dry)	----	0.01	g		----	----	----	111	----
APPROVED IDENTIFIER:	----	-	--		----	----	----	J. WILLIAMS	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	8	5	7	7
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		21	5	11	16	28
Copper	7440-50-8	5	mg/kg		8	31	19	27	17
Lead	7439-92-1	5	mg/kg		11	16	14	19	18
Nickel	7440-02-0	2	mg/kg		6	16	12	12	12
Zinc	7440-66-6	5	mg/kg		20	61	30	45	37
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	----	----	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	----	----	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		----	----	----	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	----	----	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		----	----	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	----	----	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	----	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg	----	----	----	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	----	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	----	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	----	----	----	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	----	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	----	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	----	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	----	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	----	----	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	----	----	----	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	----	----	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	----	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	----	----	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		----	----	----	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		----	----	----	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		----	----	----	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	----	----	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		----	----	----	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	----	----	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	----	----	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	----	----	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		----	----	----	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		----	----	----	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		----	----	----	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		----	----	----	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		----	----	----	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		----	----	----	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH02_2	BH02_4	BH02_4.7	BH03_0.1	BH03_4
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-020	ES2433214-023	ES2433214-025	ES2433214-029	ES2433214-035
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	79.7	81.2
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	116	113
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	----	102	105
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		100	101	99.3	100	104
2-Chlorophenol-D4	93951-73-6	0.5	%		96.2	101	101	99.4	97.5
2.4.6-Tribromophenol	118-79-6	0.5	%		82.6	85.1	85.8	83.5	86.4
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		95.9	101	101	102	98.3
Anthracene-d10	1719-06-8	0.5	%		101	108	108	109	106
4-Terphenyl-d14	1718-51-0	0.5	%		101	107	107	109	104
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		67.1	68.2	85.5	65.3	71.4
Toluene-D8	2037-26-5	0.2	%		70.8	71.3	89.9	68.3	72.2
4-Bromofluorobenzene	460-00-4	0.2	%		73.1	70.2	105	70.8	85.9
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	----	94.0
13C8-PFOA	----	0.0002	%		----	----	----	----	104

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_4.5	BH03_5	BH03_5.5	BH03_6	BH03_6.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-036	ES2433214-037	ES2433214-038	ES2433214-039	ES2433214-040
					Result	Result	Result	Result	Result
EA003 :pH (field/fox)									
pH (F)	----	0.1	pH Unit		4.8	4.9	4.7	4.9	5.3
pH (Fox)	----	0.1	pH Unit		3.5	3.8	4.1	4.8	6.7
Reaction Rate	----	1	Reaction Unit		2	2	2	2	2
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		----	----	----	15.0	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	71-43-2	0.2	mg/kg		----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	<0.5	----
Styrene	100-42-5	0.5	mg/kg		----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	<0.5	----
Isopropylbenzene	98-82-8	0.5	mg/kg		----	----	----	<0.5	----
n-Propylbenzene	103-65-1	0.5	mg/kg		----	----	----	<0.5	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		----	----	----	<0.5	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		----	----	----	<0.5	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		----	----	----	<0.5	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		----	----	----	<0.5	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		----	----	----	<0.5	----
n-Butylbenzene	104-51-8	0.5	mg/kg		----	----	----	<0.5	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		----	----	----	<5	----
2-Butanone (MEK)	78-93-3	5	mg/kg		----	----	----	<5	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		----	----	----	<5	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		----	----	----	<5	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		----	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH03_4.5	BH03_5	BH03_5.5	BH03_6	BH03_6.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-036	ES2433214-037	ES2433214-038	ES2433214-039	ES2433214-040
				Result	Result	Result	Result	Result
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	<0.5	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	<0.5	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	<0.5	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	<5	----
Chloromethane	74-87-3	5	mg/kg	----	----	----	<5	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	<5	----
Bromomethane	74-83-9	5	mg/kg	----	----	----	<5	----
Chloroethane	75-00-3	5	mg/kg	----	----	----	<5	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	<5	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	<0.5	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	<0.5	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	<0.5	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	<0.5	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	<0.5	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	<0.5	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	----	<0.5	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	----	<0.5	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	----	<0.5	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	----	<0.5	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	----	<0.5	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	----	<0.5	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	----	<0.5	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	----	<0.5	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_4.5	BH03_5	BH03_5.5	BH03_6	BH03_6.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-036	ES2433214-037	ES2433214-038	ES2433214-039	ES2433214-040
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		----	----	----	<0.5	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		----	----	----	<0.5	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		----	----	----	<0.5	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		----	----	----	<0.5	----
Pentachloroethane	76-01-7	0.5	mg/kg		----	----	----	<0.5	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		----	----	----	<0.5	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		----	----	----	<0.5	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		----	----	----	<0.5	----
Bromobenzene	108-86-1	0.5	mg/kg		----	----	----	<0.5	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		----	----	----	<0.5	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		----	----	----	<0.5	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	----	----	<0.5	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	----	----	<0.5	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	----	----	<0.5	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	----	----	<0.5	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		----	----	----	<0.5	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		----	----	----	<0.5	----
Bromodichloromethane	75-27-4	0.5	mg/kg		----	----	----	<0.5	----
Dibromochloromethane	124-48-1	0.5	mg/kg		----	----	----	<0.5	----
Bromoform	75-25-2	0.5	mg/kg		----	----	----	<0.5	----
EP074H: Naphthalene									
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	----	----	**103**	----
Toluene-D8	2037-26-5	0.5	%		----	----	----	**100.0**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_4.5	BH03_5	BH03_5.5	BH03_6	BH03_6.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-036	ES2433214-037	ES2433214-038	ES2433214-039	ES2433214-040
					Result	Result	Result	Result	Result
EP074S: VOC Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.5	%		**----**	**----**	**----**	**95.5**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH03_7	BH03_7.5	BH202_1	BH202_5	BH202_6
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-041	ES2433214-042	ES2433214-043	ES2433214-046	ES2433214-047
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	5.1	5.3	----	7.1	5.2
pH (Fox)	----	0.1	pH Unit	6.9	6.8	----	4.6	3.4
Reaction Rate	----	1	Reaction Unit	4	4	----	2	2
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	----	11.2	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	----	7	----	----
Cadmium	7440-43-9	1	mg/kg	----	----	<1	----	----
Chromium	7440-47-3	2	mg/kg	----	----	13	----	----
Copper	7440-50-8	5	mg/kg	----	----	32	----	----
Lead	7439-92-1	5	mg/kg	----	----	20	----	----
Nickel	7440-02-0	2	mg/kg	----	----	11	----	----
Zinc	7440-66-6	5	mg/kg	----	----	50	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	----	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH03_7	BH03_7.5	BH202_1	BH202_5	BH202_6
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-041	ES2433214-042	ES2433214-043	ES2433214-046	ES2433214-047
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	----	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	----	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH03_7	BH03_7.5	BH202_1	BH202_5	BH202_6
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-041	ES2433214-042	ES2433214-043	ES2433214-046	ES2433214-047
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	----	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	----	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg	----	----	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg	----	----	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH03_7	BH03_7.5	BH202_1	BH202_5	BH202_6
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-041	ES2433214-042	ES2433214-043	ES2433214-046	ES2433214-047
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		----	----	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		----	----	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		----	----	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg		----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH03_7	BH03_7.5	BH202_1	BH202_5	BH202_6
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-041	ES2433214-042	ES2433214-043	ES2433214-046	ES2433214-047
				Result	Result	Result	Result	Result
EP080: BTEXN - Continued								
Naphthalene	91-20-3	1	mg/kg	----	----	<1	----	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	**78.6**	----	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	----	**114**	----	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	----	**105**	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	----	**97.7**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	----	**92.2**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	----	**79.5**	----	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	----	**92.3**	----	----
Anthracene-d10	1719-06-8	0.5	%	----	----	**99.5**	----	----
4-Terphenyl-d14	1718-51-0	0.5	%	----	----	**98.1**	----	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	----	**85.3**	----	----
Toluene-D8	2037-26-5	0.2	%	----	----	**87.1**	----	----
4-Bromofluorobenzene	460-00-4	0.2	%	----	----	**98.4**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	5.5	----	7.1	6.9	----
pH (Fox)	----	0.1	pH Unit	4.7	----	4.7	5.0	----
Reaction Rate	----	1	Reaction Unit	2	----	2	2	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	9.1	19.6	----	7.5
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	----	No
Asbestos (Trace)	1332-21-4	-	-	----	No	----	----	No
Asbestos Type	1332-21-4	-	--	----	-	----	----	-
Synthetic Mineral Fibre	----	-	--	----	No	----	----	No
Organic Fibre	----	-	--	----	No	----	----	No
Sample weight (dry)	----	0.01	g	----	74.2	----	----	164
APPROVED IDENTIFIER:	----	-	--	----	J. WILLIAMS	----	----	J. WILLIAMS
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	7	6	----	10
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	----	<1
Chromium	7440-47-3	2	mg/kg	----	13	17	----	14
Copper	7440-50-8	5	mg/kg	----	23	13	----	28
Lead	7439-92-1	5	mg/kg	----	19	13	----	35
Nickel	7440-02-0	2	mg/kg	----	13	7	----	13
Zinc	7440-66-6	5	mg/kg	----	53	20	----	61
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
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	----	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	<0.05	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	----	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg	----	<0.05	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	----	<0.05	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	<0.05	----	----	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	----	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	----	----	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	<0.5	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	<0.5	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	<0.5	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	<0.5	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	<0.5	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	<0.5	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	<5	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	<5	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	<5	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	<5	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	<0.5	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	<0.5	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	<5	----	----
Chloromethane	74-87-3	5	mg/kg	----	----	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	----	<5	----	----
Bromomethane	74-83-9	5	mg/kg	----	----	<5	----	----
Chloroethane	75-00-3	5	mg/kg	----	----	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	<5	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	----	----	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	----	----	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	----	----	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	----	----	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	----	----	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	----	----	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	----	----	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	----	----	<0.5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	----	----	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	----	----	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	----	----	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	----	----	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	----	----	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	----	----	<0.5	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	----	----	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg	----	----	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	----	----	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	----	----	<0.5	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	----	----	<0.5	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	----	----	<0.5	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	----	----	<0.5	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	----	----	<0.5	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	----	----	<0.5	----	----
EP074G: Trihalomethanes								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP074G: Trihalomethanes - Continued								
Chloroform	67-66-3	0.5	mg/kg	----	----	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	----	----	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	----	----	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg	----	----	<0.5	----	----
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	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
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	----	<0.5
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	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	**0.6**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	**1.2**	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	<10	----	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		----	<50	<50	----	<50
C15 - C28 Fraction	----	100	mg/kg		----	<100	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg		----	<100	<100	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	<50	<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		----	<100	<100	----	<100
>C34 - C40 Fraction	----	100	mg/kg		----	<100	<100	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	<50	<50	----	<50
^ >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
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
					Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		----	<0.0005	<0.0005	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	<0.001	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	<0.0005	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	<0.0002	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	<0.0005	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	<0.0005	<0.0005	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	<0.0002	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	<0.0002	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	<0.0005	<0.0005	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	<0.0002	<0.0002	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	----	<0.0002	<0.0002	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	----	<0.0002	<0.0002	----	<0.0002
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**79.3**	----	----	**114**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**112**	----	----	**140**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**107**	----	----	**126**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	----	----	**64.3**	----	----
Toluene-D8	2037-26-5	0.5	%	----	----	**76.4**	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH202_8.5	BH04_0.1	BH04_5	BH04_5.5	BH05_0.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-048	ES2433214-049	ES2433214-055	ES2433214-056	ES2433214-058
				Result	Result	Result	Result	Result
EP074S: VOC Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.5	%	----	----	87.2	----	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	103	97.9	----	105
2-Chlorophenol-D4	93951-73-6	0.5	%	----	101	98.7	----	99.9
2.4.6-Tribromophenol	118-79-6	0.5	%	----	87.5	88.3	----	83.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	----	102	100	----	101
Anthracene-d10	1719-06-8	0.5	%	----	110	106	----	108
4-Terphenyl-d14	1718-51-0	0.5	%	----	109	106	----	107
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	----	63.7	63.5	----	81.1
Toluene-D8	2037-26-5	0.2	%	----	68.7	66.9	----	87.2
4-Bromofluorobenzene	460-00-4	0.2	%	----	66.6	89.5	----	92.4
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0002	%	----	100	108	----	98.0
13C8-PFOA	----	0.0002	%	----	111	107	----	112

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	9.5	9.2	8.2	8.1
pH (Fox)	----	0.1	pH Unit	----	8.8	9.2	7.2	7.6
Reaction Rate	----	1	Reaction Unit	----	4	4	4	4
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.7	17.8	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	----
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	----
Asbestos Type	1332-21-4	-	--	-	----	----	----	----
Synthetic Mineral Fibre	----	-	--	No	----	----	----	----
Organic Fibre	----	-	--	No	----	----	----	----
Sample weight (dry)	----	0.01	g	107	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	8	6	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	14	21	----	----	----
Copper	7440-50-8	5	mg/kg	37	19	----	----	----
Lead	7439-92-1	5	mg/kg	19	18	----	----	----
Nickel	7440-02-0	2	mg/kg	24	12	----	----	----
Zinc	7440-66-6	5	mg/kg	104	59	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	----	<0.5	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	----	<0.5	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	<0.5	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	<0.5	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	<0.5	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	<0.5	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	<0.5	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	----	<0.5	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	<5	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	----	<5	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	<5	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	<5	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	<0.5	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	<0.5	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	<0.5	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	<0.5	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	<0.5	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	<5	----	----	----
Chloromethane	74-87-3	5	mg/kg	----	<5	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	----	<5	----	----	----
Bromomethane	74-83-9	5	mg/kg	----	<5	----	----	----
Chloroethane	75-00-3	5	mg/kg	----	<5	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	----	<5	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
Iodomethane	74-88-4	0.5	mg/kg		----	<0.5	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		----	<0.5	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		----	<0.5	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		----	<0.5	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		----	<0.5	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		----	<0.5	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		----	<0.5	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		----	<0.5	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		----	<0.5	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		----	<0.5	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		----	<0.5	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		----	<0.5	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		----	<0.5	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		----	<0.5	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		----	<0.5	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		----	<0.5	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		----	<0.5	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		----	<0.5	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		----	<0.5	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		----	<0.5	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		----	<0.5	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		----	<0.5	----	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
					Result	Result	Result	Result	Result
EP074F: Halogenated Aromatic Compounds - Continued									
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	<0.5	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	<0.5	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	<0.5	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		----	<0.5	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		----	<0.5	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		----	<0.5	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		----	<0.5	----	----	----
Bromoform	75-25-2	0.5	mg/kg		----	<0.5	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_2	BH05_4.3	BH05_4.5	BH05_5	BH05_5.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-060	ES2433214-063	ES2433214-064	ES2433214-065	ES2433214-066
					Result	Result	Result	Result	Result
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	95.0	----	----	----
Toluene-D8	2037-26-5	0.5	%		----	90.3	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		----	86.9	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		101	99.0	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		101	93.0	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		91.4	78.4	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		100.0	95.5	----	----	----
Anthracene-d10	1719-06-8	0.5	%		103	102	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		106	102	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		86.8	84.9	----	----	----
Toluene-D8	2037-26-5	0.2	%		90.2	85.6	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		100	100	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	9.2	----	----	----	----
pH (Fox)	----	0.1	pH Unit	6.4	----	----	----	----
Reaction Rate	----	1	Reaction Unit	2	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	----	14.8	14.1	9.1	12.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	No	No
Asbestos (Trace)	1332-21-4	-	-	----	No	----	No	No
Asbestos Type	1332-21-4	-	--	----	-	----	-	-
Synthetic Mineral Fibre	----	-	--	----	No	----	No	No
Organic Fibre	----	-	--	----	No	----	No	No
Sample weight (dry)	----	0.01	g	----	364	----	152	261
APPROVED IDENTIFIER:	----	-	--	----	J. WILLIAMS	----	J. WILLIAMS	J. WILLIAMS
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	----	6	6	8	6
Cadmium	7440-43-9	1	mg/kg	----	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	8	12	15	12
Copper	7440-50-8	5	mg/kg	----	39	25	32	25
Lead	7439-92-1	5	mg/kg	----	17	18	20	21
Nickel	7440-02-0	2	mg/kg	----	23	14	17	15
Zinc	7440-66-6	5	mg/kg	----	122	64	72	51
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	----	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	----	----	<0.05	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	----	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	----	----	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	----	----	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	----	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	----	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	----	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	----	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	----	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	----	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	----	----	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	----	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	----	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	----	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	----	<0.05	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	----	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	----	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	----	----	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	----	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-3	0.05	mg/kg	----	----	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	----	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	----	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		----	----	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		----	----	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		----	----	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	----	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		----	----	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		----	----	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		----	----	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	----	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		----	----	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	----	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	----	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	----	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		----	----	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		----	----	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		----	----	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		----	----	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		----	----	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		----	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		----	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		----	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		----	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		----	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
				Result	Result	Result	Result	Result
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	<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	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg	----	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg	----	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	----	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	----	----	<0.0005	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	<0.001	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	<0.0002	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	<0.0002	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	<0.0005	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH05_6	BH06_2	QA102	BH07_0.5	BH07_1.5
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-067	ES2433214-071	ES2433214-077	ES2433214-080	ES2433214-082
					Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	<0.0005	----	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	<0.0002	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	80.1	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	115	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	----	104	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	100	97.7	103	101
2-Chlorophenol-D4	93951-73-6	0.5	%		----	97.8	102	99.2	83.1
2.4.6-Tribromophenol	118-79-6	0.5	%		----	84.4	87.8	89.2	78.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	97.4	102	103	86.7
Anthracene-d10	1719-06-8	0.5	%		----	104	110	111	118
4-Terphenyl-d14	1718-51-0	0.5	%		----	104	108	110	81.8
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	82.8	88.0	86.6	84.6
Toluene-D8	2037-26-5	0.2	%		----	85.7	85.6	86.1	83.7
4-Bromofluorobenzene	460-00-4	0.2	%		----	95.4	98.4	98.1	95.4
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	106	----	98.8
13C8-PFOA	----	0.0002	%		----	----	108	----	112

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	8.3	7.9	8.1	----	----
pH (Fox)	----	0.1	pH Unit	7.6	7.4	7.9	----	----
Reaction Rate	----	1	Reaction Unit	4	4	4	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	16.1	----	----	6.3	18.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	No	----
Asbestos (Trace)	1332-21-4	-	-	----	----	----	No	----
Asbestos Type	1332-21-4	-	--	----	----	----	-	----
Synthetic Mineral Fibre	----	-	--	----	----	----	No	----
Organic Fibre	----	-	--	----	----	----	No	----
Sample weight (dry)	----	0.01	g	----	----	----	171	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	J. WILLIAMS	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	6	----	----	8	6
Cadmium	7440-43-9	1	mg/kg	<1	----	----	<1	<1
Chromium	7440-47-3	2	mg/kg	11	----	----	12	21
Copper	7440-50-8	5	mg/kg	14	----	----	31	18
Lead	7439-92-1	5	mg/kg	15	----	----	21	18
Nickel	7440-02-0	2	mg/kg	8	----	----	18	11
Zinc	7440-66-6	5	mg/kg	25	----	----	88	27
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	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg		----	----	----	<0.05	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg		----	----	----	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg		----	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg		----	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	----	----	<0.05	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		----	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg		----	----	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg		----	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg		----	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	----	----	<0.05	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		----	----	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	----	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		----	----	----	<0.2	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		----	----	----	<0.05	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		----	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	----	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	----	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	----	----	<0.05	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	----	----	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	----	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	----	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	<5
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	<5
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	<5
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	<5
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	----	----	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	----	----	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	----	----	----	<0.5
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	----	----	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	----	----	----	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	<0.5
EP074G: Trihalomethanes									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
					Result	Result	Result	Result	Result
EP074G: Trihalomethanes - Continued									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	----	----	----	<0.5
Bromoform	75-25-2	0.5	mg/kg		<0.5	----	----	----	<0.5
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	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	<0.5	<0.5
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	<0.5
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	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	<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		<100	----	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	<50	<50
^ >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	%		----	----	----	**90.2**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	----	----	**131**	----
EP068T: Organophosphorus Pesticide Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH07_5	BH07_5.5	BH07_6	BH09_0.1	BH09_3.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433214-086	ES2433214-087	ES2433214-088	ES2433214-089	ES2433214-094
				Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate - Continued								
DEF	78-48-8	0.05	%	----	----	----	118	----
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	94.1	----	----	----	100
Toluene-D8	2037-26-5	0.5	%	89.8	----	----	----	97.6
4-Bromofluorobenzene	460-00-4	0.5	%	87.7	----	----	----	90.5
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	95.9	----	----	97.8	111
2-Chlorophenol-D4	93951-73-6	0.5	%	79.6	----	----	101	97.0
2.4.6-Tribromophenol	118-79-6	0.5	%	76.9	----	----	88.1	73.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	80.3	----	----	102	84.0
Anthracene-d10	1719-06-8	0.5	%	114	----	----	110	109
4-Terphenyl-d14	1718-51-0	0.5	%	82.9	----	----	109	81.1
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	84.2	----	----	90.1	89.4
Toluene-D8	2037-26-5	0.2	%	83.5	----	----	91.8	91.9
4-Bromofluorobenzene	460-00-4	0.2	%	103	----	----	103	105

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH09_4.5	BH09_5	BH09_5.5	BH09_6	----
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2433214-095	ES2433214-096	ES2433214-097	ES2433214-098	--------
				Result	Result	Result	Result	----
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	**8.2**	**8.8**	**8.4**	**8.6**	**----**
pH (Fox)	----	0.1	pH Unit	**7.8**	**8.9**	**8.9**	**8.8**	**----**
Reaction Rate	----	1	Reaction Unit	**4**	**4**	**4**	**4**	**----**

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	BH01_0.5 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH01_1.8 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH03_0.1 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH04_0.1 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH05_0.5 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH05_2 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH06_2 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH07_0.5 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH07_1.5 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	BH09_0.1 - 10-Oct-2024 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
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
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
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EA003 :pH (field/fox)

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2433214**	Page	: 1 of 25
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Order number	: ----	Date Analysis Commenced	: 14-Oct-2024
C-O-C number	: ----	Issue Date	: 17-Oct-2024
Sampler	: MK / FT		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 100		
No. of samples analysed	: 49		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Layla Hafner	Acid Sulphate Soils - Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 6119183)									
ES2433214-001	BH01_0.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	36	38.5	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	17	20	15.5	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	8	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	26	32	20.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	20	6.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	89	102	13.6	0% - 20%
ES2433214-049	BH04_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	13	17	21.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	13	13	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	9	23.9	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	25	6.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	19	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	53	58	9.7	0% - 50%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6119185)									
ES2433214-089	BH09_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	13	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	18	20	11.8	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	31	31	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	21	21	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 (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6119185) - continued									
ES2433214-089	BH09_0.1	EG005T: Zinc	7440-66-6	5	mg/kg	88	85	3.3	0% - 50%
EA003 :pH (field/fox) (QC Lot: 6122927)									
EB2434906-003	Anonymous	EA003: pH (F)	----	0.1	pH Unit	5.0	5.0	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	3.2	3.2	0.0	0% - 20%
EB2434906-013	Anonymous	EA003: pH (F)	----	0.1	pH Unit	4.3	4.2	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	3.0	3.0	0.0	0% - 20%
EA003 :pH (field/fox) (QC Lot: 6122928)									
ES2433214-014	BH01_7	EA003: pH (F)	----	0.1	pH Unit	5.9	5.9	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	5.2	5.2	0.0	0% - 20%
ES2433214-048	BH202_8.5	EA003: pH (F)	----	0.1	pH Unit	5.5	5.6	2.2	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	4.7	4.8	2.1	0% - 20%
EA003 :pH (field/fox) (QC Lot: 6122929)									
ES2433214-088	BH07_6	EA003: pH (F)	----	0.1	pH Unit	8.1	8.2	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	7.9	8.1	2.5	0% - 20%
EA003 :pH (field/fox) (QC Lot: 6126040)									
ES2433214-009	BH01_4.3	EA003: pH (F)	----	0.1	pH Unit	6.3	6.4	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	4.4	4.4	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6119186)									
ES2433214-008	BH01_3.8	EA055: Moisture Content	----	0.1 (1.0)*	%	11.8	13.7	14.6	0% - 50%
ES2433214-060	BH05_2	EA055: Moisture Content	----	0.1 (1.0)*	%	10.7	10.5	2.2	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6119187)									
ES2433320-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	42.1	38.4	9.4	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6124537)									
ES2432858-009	Anonymous	EA055: Moisture Content	----	0.1	%	29.4	28.8	2.1	0% - 20%
ES2433261-005	Anonymous	EA055: Moisture Content	----	0.1	%	84.1	81.3	3.3	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6119182)									
ES2433214-001	BH01_0.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2433214-049	BH04_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6119184)									
ES2433214-089	BH09_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6116825)									
ES2433214-001	BH01_0.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6116822)									
ES2433214-001	BH01_0.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

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: 6116822) - continued									
ES2433214-001	BH01_0.5	EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6116822)									
ES2433214-001	BH01_0.5	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 (%)*
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	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 (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 6119311) - continued									
ES2433214-055	BH04_5	EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074H: Naphthalene (QC Lot: 6119311)									
ES2433214-055	BH04_5	EP074: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6116824)									
ES2433214-049	BH04_0.1	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
ES2433214-001	BH01_0.5	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6116824) - continued									
ES2433214-001	BH01_0.5	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6116851)									
ES2433215-068	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2433215-087	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

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: 6116851) - continued									
ES2433215-087	Anonymous	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: 6116823)									
ES2433214-049	BH04_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433214-001	BH01_0.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6116852)									
ES2433215-068	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433215-087	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6117311)									
ES2433214-001	BH01_0.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2433214-049	BH04_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6119312)									
ES2433344-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2433214-055	BH04_5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116823)									
ES2433214-049	BH04_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433214-001	BH01_0.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116852)									
ES2433215-068	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116852) - continued									
ES2433215-087	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6117311)									
ES2433214-001	BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2433214-049	BH04_0.1	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: 6119312)									
ES2433344-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2433214-055	BH04_5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6117311)									
ES2433214-001	BH01_0.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2433214-049	BH04_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 6119312)									
ES2433344-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2433214-055	BH04_5	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: 6119312) - continued									
ES2433214-055	BH04_5	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6119424)									
ES2433214-001	BH01_0.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2433215-036	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6119424)									
ES2433214-001	BH01_0.5	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2433215-036	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	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 (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6119424) - continued									
ES2433215-036	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6119424)									
ES2433214-001	BH01_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2433215-036	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6119424)									
ES2433214-001	BH01_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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 (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6119424) - continued									
ES2433215-036	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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: 6119183)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	108	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	104	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	122	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	108	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	109	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	107	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	101	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6119185)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	99.6	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	89.2	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	113	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	99.9	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	100	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	97.9	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	91.7	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6119182)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	119	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6119184)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.5	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6116825)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	89.6	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6116822)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.0	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.4	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.8	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	95.3	62.0	118

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: 6116822) - continued								
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.2	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.6	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	94.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6116822)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	102	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.5	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	89.5	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	83.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.4	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	106	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6119311)								

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
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6119311) - continued								
EP074: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.6	71.0	121
EP074: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	92.9	65.0	131
EP074: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.1	72.0	114
EP074: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.1	70.0	116
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	88.0	67.0	113
EP074: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	98.3	75.0	115
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	93.4	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	88.5	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	91.9	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	89.2	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	92.0	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	91.5	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	92.7	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	87.6	59.0	125
EP074B: Oxygenated Compounds (QCLot: 6119311)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	64.8	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	87.8	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	97.0	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	92.5	54.0	136
EP074C: Sulfonated Compounds (QCLot: 6119311)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	79.5	54.0	126
EP074D: Fumigants (QCLot: 6119311)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	89.1	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	96.4	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	88.7	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	91.7	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	102	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 6119311)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	67.4	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	80.2	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	75.5	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	74.4	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	75.5	49.0	143

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
EP074E: Halogenated Aliphatic Compounds (QCLot: 6119311) - continued								
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	79.0	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	84.2	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	63.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	90.6	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	96.3	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	98.4	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	90.7	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	90.6	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	88.7	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	98.5	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	91.8	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	97.2	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	102	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	103	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	94.7	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	96.8	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	89.8	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	102	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	102	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	82.0	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	90.2	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	89.1	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 6119311)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	97.9	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	92.3	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	95.2	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	95.2	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	99.0	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	97.7	67.0	117
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	96.3	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	89.9	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	94.1	52.0	122
EP074G: Trihalomethanes (QCLot: 6119311)								

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
EP074G: Trihalomethanes (QCLot: 6119311) - continued								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	97.2	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	99.1	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	97.3	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	88.9	60.0	126
EP074H: Naphthalene (QCLot: 6119311)								
EP074: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.2	67.0	129
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116824)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	95.3	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	100.0	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.5	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	99.3	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	98.3	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	96.2	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	96.5	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	96.2	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	92.4	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	93.5	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	94.1	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	93.4	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	91.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	86.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	90.5	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116851)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	110	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	108	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	111	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	96.9	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	116	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	116	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	113	69.0	123

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: 6116851) - continued								
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	116	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	114	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	101	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	96.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.3	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116823)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	95.2	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	98.6	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	105	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116852)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	87.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	89.9	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	96.4	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6117311)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	85.3	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6119312)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	95.2	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116823)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	97.2	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	101	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	101	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116852)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	90.4	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.9	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	98.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6117311)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	87.6	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6119312)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	96.1	72.4	133
EP080: BTEXN (QCLot: 6117311)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	98.9	76.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 6117311) - continued								
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	92.8	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	92.6	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.2	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	95.8	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.4	78.8	122
EP080: BTEXN (QCLot: 6119312)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	107	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	105	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	108	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	119	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	115	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	101	78.8	122
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6119424)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	105	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.5	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.1	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6119424)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	107	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.5	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	69.0	133

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
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6119424)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6119424)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	121	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	116	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	107	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	108	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6119183)							
ES2433214-001	BH01_0.5	EG005T: Arsenic	7440-38-2	50 mg/kg	100	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	101	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	107	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	97.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	103	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.8	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6119185)							
ES2433214-089	BH09_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	93.1	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	95.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	96.5	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	92.1	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	96.0	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6119185) - continued							
ES2433214-089	BH09_0.1	EG005T: Nickel	7440-02-0	50 mg/kg	97.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	94.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6119182)							
ES2433214-001	BH01_0.5	EG035T: Mercury	7439-97-6	5 mg/kg	90.7	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6119184)							
ES2433214-089	BH09_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	89.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6116825)							
ES2433214-001	BH01_0.5	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	93.3	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6116822)							
ES2433214-001	BH01_0.5	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	82.5	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	83.4	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	78.7	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	85.6	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	93.3	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	71.3	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6116822)							
ES2433214-001	BH01_0.5	EP068: Diazinon	333-41-5	0.5 mg/kg	81.6	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	80.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	90.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	82.0	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	90.3	70.0	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6119311)							
ES2433214-055	BH04_5	EP074: Benzene	71-43-2	2.5 mg/kg	81.2	70.0	130
		EP074: Toluene	108-88-3	2.5 mg/kg	90.9	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 6119311)							
ES2433214-055	BH04_5	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	71.4	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	79.2	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 6119311)							
ES2433214-055	BH04_5	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	101	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116824)							
ES2433214-001	BH01_0.5	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	86.1	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.4	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116851)							
ES2433215-068	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	99.3	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	98.9	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116823)							
ES2433214-001	BH01_0.5	EP071: C10 - C14 Fraction	----	480 mg/kg	81.8	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	80.9	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	95.9	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116852)							
ES2433215-068	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	79.9	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	81.3	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	97.8	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6117311)							
ES2433214-001	BH01_0.5	EP080: C6 - C9 Fraction	----	32.5 mg/kg	78.2	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6119312)							
ES2433214-055	BH04_5	EP080: C6 - C9 Fraction	----	32.5 mg/kg	93.0	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116823)							
ES2433214-001	BH01_0.5	EP071: >C10 - C16 Fraction	----	860 mg/kg	81.8	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	86.9	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	102	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116852)							
ES2433215-068	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	77.4	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	87.3	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	104	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6117311)							
ES2433214-001	BH01_0.5	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	79.0	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6119312)							
ES2433214-055	BH04_5	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	91.7	61.1	142
EP080: BTEXN (QCLot: 6117311)							
ES2433214-001	BH01_0.5	EP080: Benzene	71-43-2	2.5 mg/kg	78.9	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	74.6	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	76.5	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	76.8	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	78.7	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	84.7	61.1	115
EP080: BTEXN (QCLot: 6119312)							
ES2433214-055	BH04_5	EP080: Benzene	71-43-2	2.5 mg/kg	88.7	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	92.6	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	95.2	67.4	123

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 6119312) - continued							
ES2433214-055	BH04_5	EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	99.5	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	98.6	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	95.6	61.1	115
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6119424)							
ES2433214-001	BH01_0.5	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	101	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	89.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	96.1	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	78.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	112	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	97.6	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	104	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6119424)							
ES2433214-001	BH01_0.5	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	105	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	111	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	93.6	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	99.5	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	99.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	106	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	107	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	110	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	104	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6119424)							
ES2433214-001	BH01_0.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	103	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	112	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	110	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	111	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	103	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	110	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	94.7	61.0	139

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6119424)							
ES2433214-001	BH01_0.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	115	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	103	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	109	69.2	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2433214**	Page	: 1 of 13
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Site	: Jordan Springs, NSW	Issue Date	: 17-Oct-2024
Sampler	: MK / FT	No. of samples received	: 100
Order number	: ----	No. of samples analysed	: 49

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, where applicable to the methodology, 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
EA003 :pH (field/fox)							
Snap Lock Bag - frozen on receipt at ALS (EA003)							
BH01_4.3, BH01_5, BH01_5.5, BH01_6, BH01_6.5, BH01_7, BH03_4.5, BH03_5, BH03_5.5, BH03_6, BH03_6.5, BH03_7, BH03_7.5, BH202_5, BH202_6, BH202_8.5, BH04_5, BH04_5.5, BH05_4.3, BH05_4.5, BH05_5, BH05_5.5, BH05_6, BH07_5, BH07_5.5, BH07_6, BH09_4.5, BH09_5, BH09_5.5, BH09_6	**10-Oct-2024**	**17-Oct-2024**	06-Jul-2027	✓	**17-Oct-2024**	15-Jan-2025	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
BH01_0.5, BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH04_5, BH05_0.5, BH05_2, BH05_4.3, BH06_2, QA102, BH07_0.5, BH07_1.5, BH07_5, BH09_0.1, BH09_3.8	**10-Oct-2024**	**----**	----	----	**15-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EA055)							
BH03_6	**10-Oct-2024**	**----**	----	----	**16-Oct-2024**	24-Oct-2024	✓

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
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
BH01_0.5,	BH01_1.8,	**10-Oct-2024**	**----**	----	----	**15-Oct-2024**	08-Apr-2025	✓
BH04_0.1,	BH05_0.5,							
BH05_2,	BH06_2,							
BH07_0.5,	BH07_1.5,							
BH09_0.1								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
BH03_0.1		**10-Oct-2024**	**----**	----	----	**17-Oct-2024**	08-Apr-2025	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
BH01_0.5,	BH01_1.8,	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**15-Oct-2024**	08-Apr-2025	✓
BH01_3.8,	QA101,							
BH02_2,	BH02_4,							
BH02_4.7,	BH03_0.1,							
BH03_4,	BH202_1,							
BH04_0.1,	BH04_5,							
BH05_0.5,	BH05_2,							
BH05_4.3,	BH06_2,							
QA102,	BH07_0.5,							
BH07_1.5,	BH07_5,							
BH09_0.1,	BH09_3.8							
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
BH01_0.5,	BH01_1.8,	**10-Oct-2024**	**15-Oct-2024**	07-Nov-2024	✓	**16-Oct-2024**	07-Nov-2024	✓
BH01_3.8,	QA101,							
BH02_2,	BH02_4,							
BH02_4.7,	BH03_0.1,							
BH03_4,	BH202_1,							
BH04_0.1,	BH04_5,							
BH05_0.5,	BH05_2,							
BH05_4.3,	BH06_2,							
QA102,	BH07_0.5,							
BH07_1.5,	BH07_5,							
BH09_0.1,	BH09_3.8							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
BH01_0.5,	QA101,	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
BH03_0.1,	BH03_4,							
BH202_1,	BH04_0.1,							
BH05_0.5,	QA102,							
BH09_0.1								

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) BH01_0.5, QA101, BH03_0.1, BH03_4, BH202_1, BH04_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) BH05_0.5, QA102, BH09_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) BH01_0.5, QA101, BH03_0.1, BH03_4, BH202_1, BH04_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) BH05_0.5, QA102, BH09_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074) BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074) BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074) BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074) BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓

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
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP074)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074H: Naphthalene							
Soil Glass Jar - Unpreserved (EP074)							
BH03_6	**10-Oct-2024**	**15-Oct-2024**	17-Oct-2024	✓	**15-Oct-2024**	17-Oct-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
BH01_0.5, BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH04_5, BH05_0.5, BH05_2, BH05_4.3, BH06_2, QA102, BH07_0.5, BH07_1.5, BH07_5, BH09_0.1, BH09_3.8	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
BH01_0.5, BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH04_5, BH05_0.5, BH05_2, BH05_4.3, BH06_2, QA102, BH07_0.5, BH07_1.5, BH07_5, BH09_0.1, BH09_3.8	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_0.5	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH05_0.5, BH05_2, BH06_2, QA102, BH07_0.5, BH07_1.5, BH09_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**17-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
BH01_0.5, BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH04_5, BH05_0.5, BH05_2, BH05_4.3, BH06_2, QA102, BH07_0.5, BH07_1.5, BH07_5, BH09_0.1, BH09_3.8	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_0.5	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH05_0.5, BH05_2, BH06_2, QA102, BH07_0.5, BH07_1.5, BH09_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**17-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
BH01_0.5	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH01_1.8, BH01_3.8, QA101, BH02_2, BH02_4, BH02_4.7, BH03_0.1, BH03_4, BH202_1, BH04_0.1, BH05_0.5, BH05_2, BH06_2, QA102, BH07_0.5, BH07_1.5, BH09_0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**17-Oct-2024**	24-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
BH04_5, BH05_4.3, BH07_5, BH09_3.8	**10-Oct-2024**	**15-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
BH01_0.5, QA101, BH03_4, BH04_0.1, BH04_5, BH05_0.5, QA102, BH07_1.5	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
BH01_0.5, QA101, BH03_4, BH04_0.1, BH04_5, BH05_0.5, QA102, BH07_1.5	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
BH01_0.5, QA101, BH03_4, BH04_0.1, BH04_5, BH05_0.5, QA102, BH07_1.5	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
BH01_0.5, QA101, BH03_4, BH04_0.1, BH04_5, BH05_0.5, QA102, BH07_1.5	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓

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
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
BH01_0.5, QA101, BH03_4, BH04_0.1, BH04_5, BH05_0.5, QA102, BH07_1.5	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓

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	5	49	**10.20**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	30	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH field/fox	EA003	6	47	**12.77**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	29	**10.34**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	29	**10.34**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	30	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	29	**13.79**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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*	
Matrix Spikes (MS) - Continued							
Total Mercury by FIMS	EG035T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	30	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	29	**6.90**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH field/fox	EA003	SOIL	In house: Referenced to Ahern et al 1998 - determined on a 1:5 soil/water extract designed to simulate field measured pH and pH after the extract has been oxidised with peroxide.
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
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).
Volatile Organic Compounds	EP074	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. This method is 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.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Drying only	EN020D	SOIL	In house
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.
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Brock Collinson	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	SC	Date results required:	Standard
Email Address (results and invoice):	[illegible]@stantec.com; brock.collinson@stantec.com	Report format:	ESDAT: Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

	Sample Information					Analysis Required								Comments
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold			
1	TP01	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
2	TP01	0.4-0.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
3	TP01	1.0-1.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
4	TP01	1.5-1.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
5	TP01	1.9-2.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
6	TP01	2.4-2.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
7	TP01	3.0-3.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x	x	x						
8	TP01	3.5-3.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x									
9	TP02	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x			x						
10	TP02	0.25-0.35	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
11	TP02	0.9-1.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
12	TP02	1.8-1.9	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
13	TP02	2.4-2.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
14	TP02	2.9-3.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
15	TP02	3.5-3.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x		x						
16	TP02	3.6	ES-Bag	9/10/2024	Chill								x			
17	TP03	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
18	TP03	0.7-0.8	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x			x						
19	TP03	1.3-1.4	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
20	TP03	1.9-2.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x	x	x						
21	TP03	2.4-2.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			
22	TP03	2.9-3.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x			

Environmental Division
Sydney
Work Order Reference
ES2433215

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Subcontract / Forward Lab / Split WO: RN Fox / ALS Brisbane
Lab / Analysis: Asbestos / ALS Newcastle
Organised By / Date:
Relinquished By / Date:
Connote / Courier:
WO No: ES 2433215
Attached By PO / Internal Sheet:

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Kroemer	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Brock Collinson	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAU55006
Sampler:	BC	Date results required:	Standard
Email Address (results and invoice):	[redacted]	Report format:	ESDAT: Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	ES-26: 8 metals/TRH/BTEX/N/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	ES-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						
TP03	3.4-3.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x		x									
TP04	0.4-0.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	0.9-1.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	1.5-1.7	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	2.3-2.4	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	2.9-3.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP04	3.4-3.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x		x									
TP05	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP05	0.4-0.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP05	0.9-1.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x			x									
TP05	1.4-1.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP05	1.9-2.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP05	2.4-2.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x	x	x									
TP05	3.1-3.2	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP06	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP06	0.5-0.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x			x									
TP06	1.1-1.2	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP06	1.7-1.8	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP06	2.5-2.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x						
TP06	3.4-3.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x		x									
TP07	0-0.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x												

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SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Brett Collinson	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No.:	ES24MWHAUS0006
Sampler:	BC	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; brett.collinson@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required														Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold								
TP07	0.5-0.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x								
TP07	1.0-1.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x								
TP07	1.5-1.6	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x								
TP07	2.0-2.1	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill								x								
TP07	2.9-3.0	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x	x	x	x											PACM Fragment present.
TP07	3.4-3.5	ES-Jar, ES-Bag, PFAS	9/10/2024	Chill		x														
TP07	3.5	ES-Bag	9/10/2024	Chill								x								
TP08	0-0.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP08	0.5-0.6	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x														
TP08	1.0-1.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP08	1.9-2.0	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP08	2.6-2.7	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP08	3.0-3.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x	x		x											
TP09	0-0.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP09	0.5-0.6	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP09	1.4-1.5	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x														
TP09	1.5-1.6	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP09	1.9-2.0	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP09	2.6-2.7	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP09	3.5-3.6	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x	x	x	x											
TP10	0-0.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x								
TP10	1.1-1.2	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill	Received as TP10 1.0-1.1							x								

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SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 676 773	Project Number:	305001663
Alternative Contact:	Brad Collinson	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	BC	Date results required:	Standard
Email Address (results and invoice):	[redacted]	Report format:	ESDAT: Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-23: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						
TP10	2.0-2.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP10	2.7-2.8	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x												
TP10	3.4-3.5	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP11	0-0.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x	x		x									
TP11	0.4-0.5	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP11	1.0-1.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP11	2.2-2.3	ES-Jar, ES-Bag, PFAS	10/10/2024	Frozen on Arrival		x					x							
TP11	2.6-2.7	ES-Jar, ES-Bag, PFAS	10/10/2024	Frozen on Arrival							x							
TP12	0-0.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP12	1.0-1.1	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x												
TP12	1.3-1.4	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP12	1.8-1.9	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP12	2.3-2.4	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill								x						
TP12	3.1-3.2	ES-Jar, ES-Bag, PFAS	10/10/2024	Chill		x		x	x	x								
QA100		ES-Jar, PFAS	9/10/2024	Chill		x		x										
QC100		ES-Jar, PFAS	9/10/2024	Chill														
QA200		ES-Jar, PFAS	9/10/2024	Chill		x												
QC200		ES-Jar, PFAS	9/10/2024	Chill														
QA300		ES-Jar, PFAS	9/10/2024	Chill		x												
QC300		ES-Jar, PFAS	9/10/2024	Chill														
QA400		ES-Jar, PFAS	10/10/2024	Chill		x												
QC400		ES-Jar, PFAS	10/10/2024	Chill														
					Total	28	11	7	10	1	2	55	0	0				

89

89 BH205 - 7m 9/10
90 BH205 - 5.5m 9/10
91 BH201 - 5.0m 9/10
92 BH201 - 5.5m 9/10

Relinquished by: (name / company)	Michael Koerner Stantec Australia Pty Ltd	Received by: (name / company)		Relinquished by: (name / company)	
Date & Time:	11/10/2024 11:55	Date & Time:		Date & Time:	
Signature:	MK	Signature:		Signature:	

Received by: (name / company)	
Date & Time:	11/10/24 12:20
Signature:	

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2433215**

Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: michael.koerner@cardno.com.au	E-mail	: khaleda.ataei@alsglobal.com
Telephone	: ----	Telephone	: + 61 2 8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Page	: 1 of 5
Order number	: ----	Quote number	: ES2024MWHAUS0006 (ES24MWHAUS0006)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jordan Springs, NSW		
Sampler	: BC		

Dates

Date Samples Received	: 11-Oct-2024 12:10	Issue Date	: 12-Oct-2024
Client Requested Due Date	: 18-Oct-2024	Scheduled Reporting Date	: **18-Oct-2024**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 6	Temperature	: 6.7'C & 5.5'C - Ice present
Receipt Detail	: 1 BAG	No. of samples received / analysed	: 93 / 29

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- pH/Fox analysis to be conducted by ALS Brisbane.
- Sample ID TP10_1.1-1.2 on the COC was received labelled as TP10_1.0-1.1 on the jars.
- Sample 88-93 received as extra.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Asbestos analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Any sample identifications that cannot be displayed entirely in the analysis summary table will be listed below.

ES2433215-066 : [10-Oct-2024] : TP10_1.1-1.2 - TP10_1.0-1.1

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433215-001	09-Oct-2024 00:00	TP01_0-0.1	✓						
ES2433215-002	09-Oct-2024 00:00	TP01_0.4-0.5	✓						
ES2433215-003	09-Oct-2024 00:00	TP01_1.0-1.1	✓						
ES2433215-004	09-Oct-2024 00:00	TP01_1.3-1.4	✓						
ES2433215-005	09-Oct-2024 00:00	TP01_1.9-2.0	✓						
ES2433215-006	09-Oct-2024 00:00	TP01_2.4-2.5	✓						
ES2433215-007	09-Oct-2024 00:00	TP01_3.0-3.1			✓	✓	✓	✓	✓
ES2433215-008	09-Oct-2024 00:00	TP01_3.5-3.6			✓				✓
ES2433215-009	09-Oct-2024 00:00	TP02_0-0.1			✓	✓			✓
ES2433215-010	09-Oct-2024 00:00	TP02_0.25-0.35	✓						
ES2433215-011	09-Oct-2024 00:00	TP02_0.9-1.0	✓						
ES2433215-012	09-Oct-2024 00:00	TP02_1.8-1.9	✓						
ES2433215-013	09-Oct-2024 00:00	TP02_2.4-2.5	✓						
ES2433215-014	09-Oct-2024 00:00	TP02_2.9-3.0	✓						
ES2433215-015	09-Oct-2024 00:00	TP02_3.5-3.6			✓	✓		✓	✓
ES2433215-016	09-Oct-2024 00:00	TP02_3.6	✓						
ES2433215-017	09-Oct-2024 00:00	TP03_0-0.1	✓						
ES2433215-018	09-Oct-2024 00:00	TP03_0.7-0.8			✓	✓			✓
ES2433215-019	09-Oct-2024 00:00	TP03_1.3-1.4	✓						
ES2433215-020	09-Oct-2024 00:00	TP03_1.9-2.0			✓	✓	✓	✓	✓
ES2433215-021	09-Oct-2024 00:00	TP03_2.4-2.5	✓						
ES2433215-022	09-Oct-2024 00:00	TP03_2.9-3.0	✓						
ES2433215-023	09-Oct-2024 00:00	TP03_3.4-3.5	✓						
ES2433215-024	09-Oct-2024 00:00	TP04_0-0.1			✓	✓		✓	✓
ES2433215-025	09-Oct-2024 00:00	TP04_0.4-0.5	✓						
ES2433215-026	09-Oct-2024 00:00	TP04_0.9-1.0	✓						
ES2433215-027	09-Oct-2024 00:00	TP04_1.6-1.7	✓						
ES2433215-028	09-Oct-2024 00:00	TP04_2.3-2.4	✓						
ES2433215-029	09-Oct-2024 00:00	TP04_2.9-2.4	✓						
ES2433215-030	09-Oct-2024 00:00	TP04_3.4-3.5			✓	✓		✓	✓
ES2433215-031	09-Oct-2024 00:00	TP05_0-0.1	✓						
ES2433215-032	09-Oct-2024 00:00	TP05_0.4-0.5	✓						
ES2433215-033	09-Oct-2024 00:00	TP05_0.9-1.0			✓	✓			✓

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433215-034	09-Oct-2024 00:00	TP05_1.4-1.5	✓						
ES2433215-035	09-Oct-2024 00:00	TP05_1.9-2.0	✓						
ES2433215-036	09-Oct-2024 00:00	TP05_2.4-2.5			✓	✓	✓	✓	✓
ES2433215-037	09-Oct-2024 00:00	TP05_3.1-3.2	✓						
ES2433215-038	09-Oct-2024 00:00	TP06_0-0.1	✓						
ES2433215-039	09-Oct-2024 00:00	TP06_0.5-0.6			✓	✓			✓
ES2433215-040	09-Oct-2024 00:00	TP06_1.1-1.2	✓						
ES2433215-041	09-Oct-2024 00:00	TP06_1.7-1.8	✓						
ES2433215-042	09-Oct-2024 00:00	TP06_2.5-2.6	✓						
ES2433215-043	09-Oct-2024 00:00	TP06_3.4-3.5			✓	✓		✓	✓
ES2433215-044	09-Oct-2024 00:00	TP07_0-0.1			✓				✓
ES2433215-045	09-Oct-2024 00:00	TP07_0.5-0.6	✓						
ES2433215-046	09-Oct-2024 00:00	TP07_1.0-1.1	✓						
ES2433215-047	09-Oct-2024 00:00	TP07_1.5-1.6	✓						
ES2433215-048	09-Oct-2024 00:00	TP07_2.0-2.1	✓						
ES2433215-049	09-Oct-2024 00:00	TP07_2.9-3.0			✓	✓	✓	✓	✓
ES2433215-050	09-Oct-2024 00:00	TP07_3.4-3.5			✓				✓
ES2433215-051	09-Oct-2024 00:00	TP07_3.5	✓						
ES2433215-052	10-Oct-2024 00:00	TP08_0-0.1	✓						
ES2433215-053	10-Oct-2024 00:00	TP08_0.5-0.6			✓				✓
ES2433215-054	10-Oct-2024 00:00	TP08_1.0-1.1	✓						
ES2433215-055	10-Oct-2024 00:00	TP08_1.9-2.0	✓						
ES2433215-056	10-Oct-2024 00:00	TP08_2.6-2.7	✓						
ES2433215-057	10-Oct-2024 00:00	TP08_3.0-3.1			✓	✓		✓	✓
ES2433215-058	10-Oct-2024 00:00	TP09_0-0.1	✓						
ES2433215-059	10-Oct-2024 00:00	TP09_0.5-0.6	✓						
ES2433215-060	10-Oct-2024 00:00	TP09_1.4-1.5			✓				✓
ES2433215-061	10-Oct-2024 00:00	TP09_1.5-1.6	✓						
ES2433215-062	10-Oct-2024 00:00	TP09_1.9-2.0	✓						
ES2433215-063	10-Oct-2024 00:00	TP09_2.6-2.7	✓						
ES2433215-064	10-Oct-2024 00:00	TP09_3.5-3.6			✓	✓	✓	✓	✓
ES2433215-065	10-Oct-2024 00:00	TP10_0-0.1	✓						
ES2433215-066	10-Oct-2024 00:00	TP10_1.1-1.2 TP10_1...	✓						
ES2433215-067	09-Oct-2024 00:00	TP10_2.0-2.1	✓						
ES2433215-068	10-Oct-2024 00:00	TP10_2.7-2.8			✓				✓
ES2433215-069	10-Oct-2024 00:00	TP10_3.4-3.5	✓						
ES2433215-070	10-Oct-2024 00:00	TP11_0-0.1			✓	✓		✓	✓
ES2433215-071	10-Oct-2024 00:00	TP11_0.4-0.5	✓						
ES2433215-072	10-Oct-2024 00:00	TP11_1.0-1.1	✓						
ES2433215-073	10-Oct-2024 00:00	TP11_2.2-2.3		✓	✓				✓
ES2433215-074	10-Oct-2024 00:00	TP11_2.6-2.7		✓					

			(On Hold) SOIL No analysis requested	SOIL - EA037 ASS Field Screening Analysis	SOIL - EA055-103 Moisture Content	SOIL - EA200 Asbestos Identification in Soils -	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)	SOIL - S-13 OC/OP/PCB	SOIL - S-26 8 metals/TRH/BTEXN/PAH
ES2433215-075	10-Oct-2024 00:00	TP12_0-0.1	✓						
ES2433215-076	10-Oct-2024 00:00	TP12_1.0-1.1			✓				✓
ES2433215-077	10-Oct-2024 00:00	TP12_1.3-1.4	✓						
ES2433215-078	10-Oct-2024 00:00	TP12_1.8-1.9	✓						
ES2433215-079	10-Oct-2024 00:00	TP12_2.3-2.4	✓						
ES2433215-080	10-Oct-2024 00:00	TP12_3.1-3.2			✓	✓	✓		✓
ES2433215-081	09-Oct-2024 00:00	QA100			✓		✓		✓
ES2433215-082	09-Oct-2024 00:00	QC100	✓						
ES2433215-083	09-Oct-2024 00:00	QA200			✓				✓
ES2433215-084	09-Oct-2024 00:00	QC200	✓						
ES2433215-085	09-Oct-2024 00:00	QA300			✓				✓
ES2433215-086	09-Oct-2024 00:00	QC300	✓						
ES2433215-087	09-Oct-2024 00:00	QA400			✓				✓
ES2433215-088	09-Oct-2024 00:00	QC400	✓						
ES2433215-089	09-Oct-2024 00:00	TP08_3.4-3.5	✓						
ES2433215-090	09-Oct-2024 00:00	BH201_5.0m	✓						
ES2433215-091	09-Oct-2024 00:00	BH201_5.5m	✓						
ES2433215-092	08-Oct-2024 00:00	BH205_5.5m	✓						
ES2433215-093	08-Oct-2024 00:00	BH205_7m	✓						

Matrix: **SOIL**

Laboratory sample ID	*Sampling date / time*	*Sample ID*	SOIL - EP074 (solids) minus BTEXN Volatile Organic Compounds (minus BTEXN)
ES2433215-080	10-Oct-2024 00:00	TP12_3.1-3.2	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS ADDRESS

- A4 - AU Tax Invoice (INV)	Email	sapinvoices@stantec.com

MICHAEL KOERNER

- *AU Certificate of Analysis - NATA (COA)	Email	michael.koerner@cardno.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	michael.koerner@cardno.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	michael.koerner@cardno.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	michael.koerner@cardno.com.au
- Chain of Custody (CoC) (COC)	Email	michael.koerner@cardno.com.au
- EDI Format - ESDAT (ESDAT)	Email	michael.koerner@cardno.com.au
- EDI Format - XTab (XTAB)	Email	michael.koerner@cardno.com.au

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EA037: Ass Field Screening Analysis

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

CERTIFICATE OF ANALYSIS

Work Order	: **ES2433215**	Page	: 1 of 48
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024 12:10
Order number	: ----	Date Analysis Commenced	: 14-Oct-2024
C-O-C number	: ----	Issue Date	: 17-Oct-2024 17:12
Sampler	: BC		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 93		
No. of samples analysed	: 29		

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*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Layla Hafner	Acid Sulphate Soils - Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Sanjeshni Jyoti	Senior Chemist Volatiles	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.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: The result for sample ES2433215-060 was confirmed by re-analysis.
- EG005: Poor spike recovery was obtained for Nickel on sample ES2432388 - #042. Results have been confirmed by redigestion and reanalysis.
- ASS: EA003 (NATA Field and F(ox) screening): pH F(ox) Reaction Rate: 1 - Slight; 2 - Moderate; 3 - Strong; 4 - Extreme
- 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.
- 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.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where LISTED. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		11.9	10.6	10.0	21.2	11.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	----	No	No	No
Asbestos (Trace)	1332-21-4	-	-		No	----	No	No	No
Asbestos Type	1332-21-4	-	--		-	----	-	-	-
Synthetic Mineral Fibre	----	-	--		No	----	No	No	No
Organic Fibre	----	-	--		No	----	No	No	No
Sample weight (dry)	----	0.01	g		424	----	453	376	310
APPROVED IDENTIFIER:	----	-	--		J. WILLIAMS	----	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	5	8	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		8	8	18	20	6
Copper	7440-50-8	5	mg/kg		15	25	23	10	20
Lead	7439-92-1	5	mg/kg		14	14	27	15	13
Nickel	7440-02-0	2	mg/kg		5	13	11	4	6
Zinc	7440-66-6	5	mg/kg		22	58	45	18	29
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	<0.05	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	<0.05	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	----	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	<0.05	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	<0.2	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	<0.05	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-2	0.05	mg/kg		<0.05	----	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		<0.0005	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01_3.0-3.1	TP01_3.5-3.6	TP02_0-0.1	TP02_3.5-3.6	TP03_0.7-0.8
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-007	ES2433215-008	ES2433215-009	ES2433215-015	ES2433215-018
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**74.0**	----	----	**62.3**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**109**	----	----	**105**	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**95.8**	----	----	**84.2**	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**71.0**	**75.0**	**77.9**	**75.3**	**74.2**
2-Chlorophenol-D4	93951-73-6	0.5	%		**76.5**	**78.5**	**80.6**	**78.7**	**78.0**
2.4.6-Tribromophenol	118-79-6	0.5	%		**53.6**	**59.6**	**60.2**	**56.8**	**53.5**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**75.0**	**76.0**	**78.9**	**76.3**	**77.0**
Anthracene-d10	1719-06-8	0.5	%		**74.5**	**77.2**	**79.7**	**77.4**	**77.5**
4-Terphenyl-d14	1718-51-0	0.5	%		**78.8**	**80.8**	**82.9**	**81.2**	**81.4**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**70.1**	**66.0**	**82.3**	**72.0**	**79.2**
Toluene-D8	2037-26-5	0.2	%		**88.2**	**83.4**	**104**	**90.5**	**88.8**
4-Bromofluorobenzene	460-00-4	0.2	%		**113**	**105**	**123**	**115**	**117**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**103**	----	----	----	----
13C8-PFOA	----	0.0002	%		**113**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	12.3	10.2	14.4	9.7	14.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
Sample weight (dry)	----	0.01	g	253	291	360	482	280
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	7	10	8	9	12
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	11	21	7	17	16
Copper	7440-50-8	5	mg/kg	28	17	38	40	32
Lead	7439-92-1	5	mg/kg	17	19	35	28	25
Nickel	7440-02-0	2	mg/kg	13	9	20	30	14
Zinc	7440-66-6	5	mg/kg	72	34	91	64	61
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<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	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<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	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		<0.0005	----	----	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	<0.0005
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP03_1.9-2.0	TP04_0-0.1	TP04_3.4-3.5	TP05_0.9-1.0	TP05_2.4-2.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-020	ES2433215-024	ES2433215-030	ES2433215-033	ES2433215-036
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		63.0	70.6	62.9	----	60.8
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		84.6	98.6	84.4	----	85.7
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		68.4	77.9	65.9	----	73.0
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		75.9	73.8	71.4	76.3	75.0
2-Chlorophenol-D4	93951-73-6	0.5	%		80.6	76.8	75.7	80.4	79.9
2.4.6-Tribromophenol	118-79-6	0.5	%		58.8	53.7	52.3	54.6	54.2
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		78.2	75.6	73.6	78.6	78.6
Anthracene-d10	1719-06-8	0.5	%		78.7	75.4	73.8	78.0	78.8
4-Terphenyl-d14	1718-51-0	0.5	%		83.3	80.2	78.3	83.2	82.5
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		76.9	84.0	80.9	79.3	67.5
Toluene-D8	2037-26-5	0.2	%		97.5	103	101	99.6	81.6
4-Bromofluorobenzene	460-00-4	0.2	%		129	122	122	127	104
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		98.0	----	----	----	100
13C8-PFOA	----	0.0002	%		110	----	----	----	111

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		8.5	21.3	9.4	25.7	11.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils									
Asbestos Detected	1332-21-4	0.1	g/kg		No	No	----	No	----
Asbestos (Trace)	1332-21-4	-	-		No	No	----	No	----
Asbestos Type	1332-21-4	-	--		-	-	----	-	----
Synthetic Mineral Fibre	----	-	--		No	No	----	No	----
Organic Fibre	----	-	--		No	No	----	No	----
Sample weight (dry)	----	0.01	g		482	353	----	334	----
APPROVED IDENTIFIER:	----	-	--		J. WILLIAMS	J. WILLIAMS	----	J. WILLIAMS	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	<5	9	8	8
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		15	9	21	31	12
Copper	7440-50-8	5	mg/kg		32	21	16	22	17
Lead	7439-92-1	5	mg/kg		22	10	17	23	17
Nickel	7440-02-0	2	mg/kg		16	3	10	14	20
Zinc	7440-66-6	5	mg/kg		64	24	34	46	70
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	<0.1	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg		----	<0.05	----	<0.05	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg		----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Heptachlor	76-44-8	0.05	mg/kg		----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg		----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	<0.05	----	<0.05	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg		----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg		----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg		----	<0.05	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg		----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg		----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	<0.05	----	<0.05	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		----	<0.05	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	<0.05	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg		----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		----	<0.2	----	<0.2	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		----	<0.05	----	<0.05	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		----	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg		----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg		----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg		----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg		----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg		----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg		----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg		----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg		----	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg		----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg		----	<0.05	----	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		----	----	----	<0.0005	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		----	----	----	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	----	----	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	----	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		----	----	----	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		----	----	----	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		----	----	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		----	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	----	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	----	----	<0.0002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	----	----	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	----	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	----	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	----	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	----	<0.0005	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06_0.5-0.6	TP06_3.4-3.5	TP07_0-0.1	TP07_2.9-3.0	TP07_3.4-3.5
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-039	ES2433215-043	ES2433215-044	ES2433215-049	ES2433215-050
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	<0.0002	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	81.4	----	67.4	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	108	----	103	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	90.4	----	84.7	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		74.7	71.7	76.5	75.8	75.8
2-Chlorophenol-D4	93951-73-6	0.5	%		77.9	74.8	80.2	79.7	78.6
2.4.6-Tribromophenol	118-79-6	0.5	%		55.8	52.9	55.5	60.5	58.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		76.0	72.8	79.2	77.1	75.8
Anthracene-d10	1719-06-8	0.5	%		76.6	73.9	79.3	78.3	74.9
4-Terphenyl-d14	1718-51-0	0.5	%		80.2	77.4	83.1	81.9	79.8
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		79.0	67.9	77.0	75.1	80.3
Toluene-D8	2037-26-5	0.2	%		95.8	85.4	89.7	91.9	82.9
4-Bromofluorobenzene	460-00-4	0.2	%		115	104	110	115	81.1
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	102	----
13C8-PFOA	----	0.0002	%		----	----	----	112	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.0	8.3	9.6	14.1	14.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	No	----
Asbestos (Trace)	1332-21-4	-	-	----	No	----	No	----
Asbestos Type	1332-21-4	-	--	----	-	----	-	----
Synthetic Mineral Fibre	----	-	--	----	No	----	No	----
Organic Fibre	----	-	--	----	No	----	No	----
Sample weight (dry)	----	0.01	g	----	464	----	420	----
APPROVED IDENTIFIER:	----	-	--	----	J. WILLIAMS	----	J. WILLIAMS	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	6	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	7	21	8	16	10
Copper	7440-50-8	5	mg/kg	38	25	42	20	15
Lead	7439-92-1	5	mg/kg	12	18	19	27	16
Nickel	7440-02-0	2	mg/kg	4	19	30	24	10
Zinc	7440-66-6	5	mg/kg	77	46	116	45	23
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	----	<0.05	----	<0.05	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	----	<0.05	----	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor	76-44-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	----	<0.05	----	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	----	<0.05	----	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	----	<0.05	----	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg		----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg		----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg		----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg		----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg		----	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg		----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg		----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg		----	<0.05	----	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	**1.8**	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	**0.6**	<0.5	**2.5**	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	**0.6**	<0.5	**2.4**	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	**0.7**	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	**0.7**	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	**0.8**	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	**0.7**	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	**0.6**	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	**1.2**	<0.5	**10.2**	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	**0.9**	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**1.2**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.5**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	**12**	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	**16**	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	**16**	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
					Result	Result	Result	Result	Result
EP080: BTEXN - Continued									
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		----	----	----	<0.0005	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		----	----	----	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		----	----	----	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		----	----	----	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		----	----	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	<0.0002	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	<0.0005	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	<0.0002	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	----	----	----	<0.0005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	----	----	----	<0.0005	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	----	----	----	<0.0002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	----	----	----	<0.0002	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	----	----	----	<0.0005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	----	----	----	<0.0005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	----	----	----	<0.0005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	----	----	----	<0.0005	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	----	----	----	<0.0002	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP08_0.5-0.6	TP08_3.0-3.1	TP09_1.4-1.5	TP09_3.5-3.6	TP10_2.7-2.8
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-053	ES2433215-057	ES2433215-060	ES2433215-064	ES2433215-068
					Result	Result	Result	Result	Result
EP231P: PFAS Sums - Continued									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	<0.0002	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	<0.0002	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	70.4	----	65.4	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	101	----	99.2	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	81.3	----	68.1	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		77.3	75.0	75.4	73.5	82.8
2-Chlorophenol-D4	93951-73-6	0.5	%		81.4	78.0	79.2	76.8	103
2.4.6-Tribromophenol	118-79-6	0.5	%		60.8	56.9	57.1	43.9	66.2
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		76.8	74.5	75.4	73.7	86.6
Anthracene-d10	1719-06-8	0.5	%		79.7	77.6	78.2	75.6	115
4-Terphenyl-d14	1718-51-0	0.5	%		82.5	79.3	81.3	77.4	80.3
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		83.8	87.9	77.5	90.0	75.2
Toluene-D8	2037-26-5	0.2	%		83.2	89.3	87.4	89.0	82.5
4-Bromofluorobenzene	460-00-4	0.2	%		82.4	86.7	85.5	82.9	83.1
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	100	----
13C8-PFOA	----	0.0002	%		----	----	----	110	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
				Result	Result	Result	Result	Result
EA003 :pH (field/fox)								
pH (F)	----	0.1	pH Unit	----	7.6	7.2	----	----
pH (Fox)	----	0.1	pH Unit	----	5.0	7.5	----	----
Reaction Rate	----	1	Reaction Unit	----	2	4	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	10.3	15.0	----	8.6	19.2
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	----	----	----	No
Asbestos (Trace)	1332-21-4	-	-	No	----	----	----	No
Asbestos Type	1332-21-4	-	--	-	----	----	----	-
Synthetic Mineral Fibre	----	-	--	No	----	----	----	No
Organic Fibre	----	-	--	No	----	----	----	No
Sample weight (dry)	----	0.01	g	268	----	----	----	368
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	----	----	----	J. WILLIAMS
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	5	----	<5	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	<1	<1
Chromium	7440-47-3	2	mg/kg	9	16	----	7	14
Copper	7440-50-8	5	mg/kg	17	17	----	39	23
Lead	7439-92-1	5	mg/kg	12	12	----	22	17
Nickel	7440-02-0	2	mg/kg	9	7	----	8	16
Zinc	7440-66-6	5	mg/kg	39	19	----	76	71
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	----	----	----	----	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	----	----	----	----	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	----	----	----	----	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	----	----	----	----	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	----	----	----	----	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	----	----	----	----	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	----	----	----	----	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
n-Butylbenzene	104-51-8	0.5	mg/kg	----	----	----	----	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	----	----	----	----	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	----	----	----	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	----	----	----	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	----	----	----	----	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	----	----	----	----	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	----	----	----	----	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	----	----	----	----	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	----	----	----	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	----	----	----	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	----	----	----	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	----	----	----	----	<5
Chloromethane	74-87-3	5	mg/kg	----	----	----	----	<5
Vinyl chloride	75-01-4	5	mg/kg	----	----	----	----	<5
Bromomethane	74-83-9	5	mg/kg	----	----	----	----	<5
Chloroethane	75-00-3	5	mg/kg	----	----	----	----	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	----	----	----	----	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	----	----	----	----	<0.5
Iodomethane	74-88-4	0.5	mg/kg	----	----	----	----	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	----	----	----	----	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	----	----	----	----	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	----	----	----	----	<0.5
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	----	----	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		----	----	----	----	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg		----	----	----	----	<0.5
Trichloroethene	79-01-6	0.5	mg/kg		----	----	----	----	<0.5
Dibromomethane	74-95-3	0.5	mg/kg		----	----	----	----	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		----	----	----	----	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg		----	----	----	----	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg		----	----	----	----	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		----	----	----	----	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		----	----	----	----	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		----	----	----	----	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		----	----	----	----	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		----	----	----	----	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		----	----	----	----	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg		----	----	----	----	<0.5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		----	----	----	----	<0.5
Bromobenzene	108-86-1	0.5	mg/kg		----	----	----	----	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg		----	----	----	----	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg		----	----	----	----	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		----	----	----	----	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		----	----	----	----	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		----	----	----	----	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		----	----	----	----	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		----	----	----	----	<0.5
EP074G: Trihalomethanes									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP074G: Trihalomethanes - Continued									
Chloroform	67-66-3	0.5	mg/kg		----	----	----	----	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg		----	----	----	----	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg		----	----	----	----	<0.5
Bromoform	75-25-2	0.5	mg/kg		----	----	----	----	<0.5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	----	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	----	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	----	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	----	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<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	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	----	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	----	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	<1	<1
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		----	----	----	----	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		----	----	----	----	<0.0002

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	----	----	----	----	<0.0005
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	----	----	----	----	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	----	----	----	----	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	----	----	----	----	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	----	----	----	----	<0.0005
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	----	----	----	----	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	----	----	----	----	<0.0005

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		----	----	----	----	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		----	----	----	----	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		----	----	----	----	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		----	----	----	----	<0.0002
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		----	----	----	----	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		----	----	----	----	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		----	----	----	----	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		----	----	----	----	<0.0005
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		----	----	----	----	<0.0002
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		----	----	----	----	<0.0002
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**70.7**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**99.8**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**80.7**	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		----	----	----	----	**76.0**
Toluene-D8	2037-26-5	0.5	%		----	----	----	----	**84.7**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11_0-0.1	TP11_2.2-2.3	TP11_2.6-2.7	TP12_1.0-1.1	TP12_3.1-3.2
				Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2433215-070	ES2433215-073	ES2433215-074	ES2433215-076	ES2433215-080
					Result	Result	Result	Result	Result
EP074S: VOC Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.5	%		----	----	----	----	85.7
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		74.5	94.1	----	85.3	96.1
2-Chlorophenol-D4	93951-73-6	0.5	%		77.1	85.8	----	81.5	87.5
2.4.6-Tribromophenol	118-79-6	0.5	%		54.1	72.8	----	62.9	74.6
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		74.0	82.4	----	87.4	87.6
Anthracene-d10	1719-06-8	0.5	%		77.0	115	----	111	113
4-Terphenyl-d14	1718-51-0	0.5	%		78.2	80.4	----	81.4	81.4
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		89.8	84.6	----	96.7	74.1
Toluene-D8	2037-26-5	0.2	%		84.6	84.4	----	96.4	81.0
4-Bromofluorobenzene	460-00-4	0.2	%		82.6	82.0	----	88.7	81.7
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		----	----	----	----	99.2
13C8-PFOA	----	0.0002	%		----	----	----	----	109

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QA100	QA200	QA300	QA400	----
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2433215-081	ES2433215-083	ES2433215-085	ES2433215-087	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**10.9**	**11.8**	**9.9**	**8.7**	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**8**	**7**	**7**	**8**	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	**12**	**18**	**15**	**8**	----
Copper	7440-50-8	5	mg/kg	**22**	**15**	**16**	**40**	----
Lead	7439-92-1	5	mg/kg	**18**	**17**	**17**	**18**	----
Nickel	7440-02-0	2	mg/kg	**11**	**8**	**8**	**19**	----
Zinc	7440-66-6	5	mg/kg	**47**	**29**	**30**	**87**	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA100	QA200	QA300	QA400	----
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit		ES2433215-081	ES2433215-083	ES2433215-085	ES2433215-087	--------
					Result	Result	Result	Result	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	<50	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<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	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QA100	QA200	QA300	QA400	----
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2433215-081	ES2433215-083	ES2433215-085	ES2433215-087	--------
				Result	Result	Result	Result	----
EP080: BTEXN - Continued								
^ **Total Xylenes**	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QA100	QA200	QA300	QA400	----
			Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit	ES2433215-081	ES2433215-083	ES2433215-085	ES2433215-087	--------
				Result	Result	Result	Result	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	<0.0002	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA100	QA200	QA300	QA400	----
				Sampling date / time	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	09-Oct-2024 00:00	----
Compound	CAS Number	LOR	Unit		ES2433215-081	ES2433215-083	ES2433215-085	ES2433215-087	--------
					Result	Result	Result	Result	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
Phenol-d6	13127-88-3	0.5	%		87.7	83.9	80.6	82.6	----
2-Chlorophenol-D4	93951-73-6	0.5	%		85.8	80.8	85.3	80.6	----
2.4.6-Tribromophenol	118-79-6	0.5	%		80.4	95.8	72.6	75.7	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		89.0	113	86.5	84.2	----
Anthracene-d10	1719-06-8	0.5	%		113	115	116	118	----
4-Terphenyl-d14	1718-51-0	0.5	%		83.0	82.0	81.1	80.2	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		77.2	80.5	85.2	82.9	----
Toluene-D8	2037-26-5	0.2	%		82.6	89.5	93.8	93.2	----
4-Bromofluorobenzene	460-00-4	0.2	%		86.2	91.2	92.4	91.6	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		95.8	----	----	----	----
13C8-PFOA	----	0.0002	%		109	----	----	----	----

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	TP01_3.0-3.1 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP02_0-0.1 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP02_3.5-3.6 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP03_0.7-0.8 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP03_1.9-2.0 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP04_0-0.1 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP04_3.4-3.5 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP05_0.9-1.0 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP05_2.4-2.5 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP06_0.5-0.6 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP06_3.4-3.5 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP07_2.9-3.0 - 09-Oct-2024 00:00	A soil sample.
EA200: Description	TP08_3.0-3.1 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	TP09_3.5-3.6 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	TP11_0-0.1 - 10-Oct-2024 00:00	A soil sample.
EA200: Description	TP12_3.1-3.2 - 10-Oct-2024 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
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
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
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EA003 :pH (field/fox)

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2433215**	Page	: 1 of 26
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Order number	: ----	Date Analysis Commenced	: 14-Oct-2024
C-O-C number	: ----	Issue Date	: 17-Oct-2024
Sampler	: BC		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 93		
No. of samples analysed	: 29		

Accreditation No. 825
Accredited for compliance with ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Layla Hafner	Acid Sulphate Soils - Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Sanjeshni Jyoti	Senior Chemist Volatiles	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.

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 6116780)									
ES2432388-042	Anonymous	EG005T: Nickel	7440-02-0	2	mg/kg	124	129	3.9	0% - 20%
ES2432388-042	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	10	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13	87.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	61	64	5.4	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	40	52	27.4	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	61	84	32.3	0% - 50%
ES2433215-009	TP02_0-0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	18	24	25.9	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	11	11	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	11	26.3	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	17	31.1	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	27	19	35.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	45	41	10.0	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6116781)									
ES2433215-044	TP07_0-0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	21	19	12.2	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	10	11	11.7	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	9	10	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	17	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	18	8.0	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 (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6116781) - continued									
ES2433215-044	TP07_0-0.1	EG005T: Zinc	7440-66-6	5	mg/kg	34	36	6.9	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6117325)									
ES2433215-050	TP07_3.4-3.5	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	18	40.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	20	14	32.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	6	32.4	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	18	7.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	17	18	6.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	70	55	23.6	0% - 50%
ES2433215-081	QA100	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	12	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	11	13	16.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	26	15.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	18	18	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	47	69	38.7	0% - 50%
EA003 :pH (field/fox) (QC Lot: 6122929)									
ES2433214-088	Anonymous	EA003: pH (F)	----	0.1	pH Unit	8.1	8.2	0.0	0% - 20%
		EA003: pH (Fox)	----	0.1	pH Unit	7.9	8.1	2.5	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6116793)									
ES2432388-050	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	5.3	5.8	9.2	No Limit
ES2433215-030	TP04_3.4-3.5	EA055: Moisture Content	----	0.1 (1.0)*	%	14.4	13.4	7.2	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6117329)									
ES2432960-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	8.7	9.1	4.6	No Limit
ES2432960-016	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	9.4	8.7	7.6	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6117330)									
ES2433215-060	TP09_1.4-1.5	EA055: Moisture Content	----	0.1 (1.0)*	%	9.6	8.4	13.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6116779)									
ES2432388-042	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2433215-009	TP02_0-0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6116782)									
ES2433215-044	TP07_0-0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6117326)									
ES2433215-050	TP07_3.4-3.5	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2433215-081	QA100	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6116814)									

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6116814) - continued									
ES2433215-007	TP01_3.0-3.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2433215-043	TP06_3.4-3.5	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6116811)									
ES2433215-007	TP01_3.0-3.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2433215-043	TP06_3.4-3.5	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

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: 6116811) - continued									
ES2433215-043	TP06_3.4-3.5	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: 6116811)									
ES2433215-007	TP01_3.0-3.1	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
ES2433215-043	TP06_3.4-3.5	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

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6116811) - continued									
ES2433215-043	TP06_3.4-3.5	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
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 6117288) - continued									
ES2433215-080	TP12_3.1-3.2	EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 6117288)									
ES2433215-080	TP12_3.1-3.2	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	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 (%)*
EP074G: Trihalomethanes (QC Lot: 6117288) - continued									
ES2433215-080	TP12_3.1-3.2	EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6116813)									
ES2433215-007	TP01_3.0-3.1	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
ES2433215-043	TP06_3.4-3.5	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

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: 6116813) - continued									
ES2433215-043	TP06_3.4-3.5	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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6116851)									
ES2433215-068	TP10_2.7-2.8	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
ES2433215-087	QA400	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

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: 6116851) - continued									
ES2433215-087	QA400	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: 6116621)									
ES2433221-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2433221-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6116812)									
ES2433215-007	TP01_3.0-3.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433215-043	TP06_3.4-3.5	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6116852)									
ES2433215-068	TP10_2.7-2.8	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433215-087	QA400	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6117287)									
ES2433215-050	TP07_3.4-3.5	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2433215-080	TP12_3.1-3.2	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116621)									
ES2433221-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2433221-002	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: 6116812)									
ES2433215-007	TP01_3.0-3.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433215-043	TP06_3.4-3.5	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6116852)									
ES2433215-068	TP10_2.7-2.8	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2433215-087	QA400	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6117287)									
ES2433215-050	TP07_3.4-3.5	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2433215-080	TP12_3.1-3.2	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6116621)									
ES2433221-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2433221-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 6117287)									
ES2433215-050	TP07_3.4-3.5	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2433215-080	TP12_3.1-3.2	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: 6117287) - continued									
ES2433215-080	TP12_3.1-3.2	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6119424)									
ES2433214-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2433215-036	TP05_2.4-2.5	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6119424)									
ES2433214-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2433215-036	TP05_2.4-2.5	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	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 (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6119424) - continued									
ES2433215-036	TP05_2.4-2.5	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6119424)									
ES2433214-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2433215-036	TP05_2.4-2.5	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6119424)									
ES2433214-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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 (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6119424) - continued									
ES2433215-036	TP05_2.4-2.5	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	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: 6116780)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	98.8	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	82.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	120	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	102	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	95.7	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	100	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.3	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6116781)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	105	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	94.5	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	125	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	110	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	102	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	105	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	93.1	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6117325)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	103	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	96.0	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	110	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	103	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	102	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	96.4	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	91.1	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6116779)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	79.8	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6116782)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	102	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6117326)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	86.8	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6116814)								

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
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6116814) - continued								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	90.7	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6116811)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.4	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	81.9	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.9	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	86.8	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.9	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	94.1	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	96.4	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6116811)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	76.5	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	89.1	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	76.5	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.7	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.9	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	99.3	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	78.7	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.5	76.0	118

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6116811) - continued								
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.8	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	80.9	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	76.0	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	69.2	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 6117288)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	92.6	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	95.5	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	97.4	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	97.0	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	97.3	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	96.3	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	97.4	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	94.6	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	99.7	59.0	125
EP074B: Oxygenated Compounds (QCLot: 6117288)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	94.1	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	90.0	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	94.0	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	89.4	54.0	136
EP074C: Sulfonated Compounds (QCLot: 6117288)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	102	54.0	126
EP074D: Fumigants (QCLot: 6117288)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	98.0	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	95.4	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	94.9	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	95.5	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 6117288)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	114	30.0	148

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
EP074E: Halogenated Aliphatic Compounds (QCLot: 6117288) - continued								
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	113	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	111	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	100	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	104	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	101	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	103	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	87.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	100	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	99.1	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	101	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	96.4	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	100.0	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	96.4	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	98.5	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	97.9	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	97.8	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	97.1	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	110	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	95.9	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	95.5	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	95.1	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	99.1	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	95.2	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	90.5	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	89.3	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	99.9	50.0	128
EP074F: Halogenated Aromatic Compounds (QCLot: 6117288)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	96.7	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	97.1	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	99.7	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	99.2	67.0	123
EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	99.2	70.0	116
EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	98.9	67.0	117

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
EP074F: Halogenated Aromatic Compounds (QCLot: 6117288) - continued								
EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	99.2	70.0	114
EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	102	48.0	122
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	102	52.0	122
EP074G: Trihalomethanes (QCLot: 6117288)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	99.6	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	98.3	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	93.9	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	91.4	60.0	126
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116813)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	96.2	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	100	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	105	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	104	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	95.5	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	104	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	98.5	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	101	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	93.7	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	99.4	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	91.9	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	93.8	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116851)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	110	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	102	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	108	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	111	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	96.9	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	116	73.0	127

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116851) - continued								
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	116	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	113	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	116	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	114	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	101	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	96.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	94.3	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	102	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116621)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	102	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116812)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	96.8	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	101	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	108	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116852)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	87.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	89.9	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	96.4	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6117287)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	87.8	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116621)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	107	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116812)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	98.9	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	109	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116852)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	90.4	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.9	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	98.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6117287)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	85.3	72.4	133

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
EP080: BTEXN (QCLot: 6116621)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	98.5	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	109	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	114	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	114	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	117	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	111	78.8	122
EP080: BTEXN (QCLot: 6117287)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.5	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	90.2	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	89.0	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	93.1	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	92.6	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	88.2	78.8	122
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6119424)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	105	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.5	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.1	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6119424)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	107	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.5	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	116	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	66.0	139

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6119424) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6119424)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	104	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	118	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6119424)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	121	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	116	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	107	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	108	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6116780)							
ES2432388-042	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	95.4	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	103	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	96.6	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	# 8.6	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	84.0	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6116781)							
ES2433215-044	TP07_0-0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	92.2	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	113	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6116781) - continued							
ES2433215-044	TP07_0-0.1	EG005T: Chromium	7440-47-3	50 mg/kg	89.8	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	103	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	99.9	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	98.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.4	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6117325)							
ES2433215-050	TP07_3.4-3.5	EG005T: Arsenic	7440-38-2	50 mg/kg	91.8	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.4	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	127	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	99.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	82.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6116779)							
ES2432388-042	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	95.1	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6116782)							
ES2433215-044	TP07_0-0.1	EG035T: Mercury	7439-97-6	5 mg/kg	88.9	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6117326)							
ES2433215-050	TP07_3.4-3.5	EG035T: Mercury	7439-97-6	5 mg/kg	91.2	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6116814)							
ES2433215-007	TP01_3.0-3.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	90.5	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6116811)							
ES2433215-007	TP01_3.0-3.1	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	88.5	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	79.5	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	94.1	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	77.9	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	85.9	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	73.9	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6116811)							
ES2433215-007	TP01_3.0-3.1	EP068: Diazinon	333-41-5	0.5 mg/kg	77.1	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	76.5	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	80.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	87.2	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	75.3	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 6117288)							
ES2433215-080	TP12_3.1-3.2	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	90.1	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP074E: Halogenated Aliphatic Compounds (QCLot: 6117288) - continued							
ES2433215-080	TP12_3.1-3.2	EP074: Trichloroethene	79-01-6	2.5 mg/kg	87.7	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 6117288)							
ES2433215-080	TP12_3.1-3.2	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	90.4	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116813)							
ES2433215-007	TP01_3.0-3.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	94.9	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	100	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6116851)							
ES2433215-068	TP10_2.7-2.8	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	99.3	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	98.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116621)							
ES2433221-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	100	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116812)							
ES2433215-007	TP01_3.0-3.1	EP071: C10 - C14 Fraction	----	480 mg/kg	79.8	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	78.7	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	92.1	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6116852)							
ES2433215-068	TP10_2.7-2.8	EP071: C10 - C14 Fraction	----	480 mg/kg	79.9	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	81.3	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	97.8	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6117287)							
ES2433215-080	TP12_3.1-3.2	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.2	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116621)							
ES2433221-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	100	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116812)							
ES2433215-007	TP01_3.0-3.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	80.1	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	84.0	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	99.0	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6116852)							
ES2433215-068	TP10_2.7-2.8	EP071: >C10 - C16 Fraction	----	860 mg/kg	77.4	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	87.3	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	104	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6117287)							
ES2433215-080	TP12_3.1-3.2	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	92.2	61.1	142
EP080: BTEXN (QCLot: 6116621)							
ES2433221-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	81.9	62.1	122

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 6116621) - continued							
ES2433221-001	Anonymous	EP080: Toluene	108-88-3	2.5 mg/kg	92.3	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	96.0	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	101	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	97.7	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	93.5	61.1	115
EP080: BTEXN (QCLot: 6117287)							
ES2433215-080	TP12_3.1-3.2	EP080: Benzene	71-43-2	2.5 mg/kg	88.3	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	84.4	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	86.5	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	88.0	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	89.0	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	91.4	61.1	115
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6119424)							
ES2433214-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	101	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	89.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	96.1	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	78.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	112	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	97.6	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	104	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6119424)							
ES2433214-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	105	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	111	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	93.6	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	99.5	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	98.4	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	99.4	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	106	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	107	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	110	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	104	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6119424)							
ES2433214-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	103	67.0	137

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6119424) - continued							
ES2433214-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	112	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	110	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	111	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	103	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	110	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	94.7	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6119424)							
ES2433214-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	115	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	103	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	109	69.2	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2433215**	Page	: 1 of 14
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Site	: Jordan Springs, NSW	Issue Date	: 17-Oct-2024
Sampler	: BC	No. of samples received	: 93
Order number	: ----	No. of samples analysed	: 29

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.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005(ED093)T: Total Metals by ICP-AES	ES2432388--042	Anonymous	**Nickel**	7440-02-0	8.6 %	70.0-130%	**Recovery less than lower data quality objective**

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Moisture Content	EA055	5	53	9.43	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **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*
EA003 :pH (field/fox)								
Snap Lock Bag - frozen on receipt at ALS (EA003)								
TP11_2.2-2.3,	TP11_2.6-2.7	**10-Oct-2024**	**17-Oct-2024**	06-Jul-2027	✓	**17-Oct-2024**	15-Jan-2025	✓
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)								
TP01_3.0-3.1,	TP01_3.5-3.6,	**09-Oct-2024**	**----**	----	----	**14-Oct-2024**	23-Oct-2024	✓
TP02_0-0.1,	TP02_3.5-3.6,							
TP03_0.7-0.8,	TP03_1.9-2.0,							
TP04_0-0.1,	TP04_3.4-3.5,							
TP05_0.9-1.0,	TP05_2.4-2.5,							
TP06_0.5-0.6,	TP06_3.4-3.5,							
TP07_0-0.1,	TP07_2.9-3.0,							
TP07_3.4-3.5,	QA100,							
QA200,	QA300,							
QA400								
Soil Glass Jar - Unpreserved (EA055)								

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) - Continued							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**----**	----	----	**14-Oct-2024**	24-Oct-2024	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
TP01_3.0-3.1, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_2.9-3.0	**09-Oct-2024**	**----**	----	----	**15-Oct-2024**	07-Apr-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
TP08_3.0-3.1, TP09_3.5-3.6, TP11_0-0.1, TP12_3.1-3.2	**10-Oct-2024**	**----**	----	----	**15-Oct-2024**	08-Apr-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	07-Apr-2025	✓	**15-Oct-2024**	07-Apr-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**15-Oct-2024**	07-Apr-2025	✓
Soil Glass Jar - Unpreserved (EG005T)							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	08-Apr-2025	✓	**15-Oct-2024**	08-Apr-2025	✓

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
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	06-Nov-2024	✓	**15-Oct-2024**	06-Nov-2024	✓
Soil Glass Jar - Unpreserved (EG035T)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0	**09-Oct-2024**	**15-Oct-2024**	06-Nov-2024	✓	**16-Oct-2024**	06-Nov-2024	✓
Soil Glass Jar - Unpreserved (EG035T)							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	07-Nov-2024	✓	**15-Oct-2024**	07-Nov-2024	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TP01_3.0-3.1, TP02_3.5-3.6, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_2.4-2.5	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP066)							
TP06_3.4-3.5, TP07_2.9-3.0	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP066)							
TP08_3.0-3.1, TP09_3.5-3.6, TP11_0-0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TP01_3.0-3.1, TP02_3.5-3.6, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_2.4-2.5, TP06_3.4-3.5, TP07_2.9-3.0	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068)							
TP08_3.0-3.1, TP09_3.5-3.6, TP11_0-0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓

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
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) TP01_3.0-3.1, TP02_3.5-3.6, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_2.4-2.5, TP06_3.4-3.5, TP07_2.9-3.0	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP068) TP08_3.0-3.1, TP09_3.5-3.6, TP11_0-0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	17-Oct-2024	✓	**16-Oct-2024**	17-Oct-2024	✓

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
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0, TP07_3.4-3.5	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP11_0-0.1	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP10_2.7-2.8, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	23-Nov-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0, TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**16-Oct-2024**	23-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP10_2.7-2.8, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0, TP07_3.4-3.5, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**16-Oct-2024**	23-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP10_2.7-2.8, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**15-Oct-2024**	23-Nov-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TP07_3.4-3.5	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**15-Oct-2024**	23-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01_3.0-3.1, TP01_3.5-3.6, TP02_0-0.1, TP02_3.5-3.6, TP03_0.7-0.8, TP03_1.9-2.0, TP04_0-0.1, TP04_3.4-3.5, TP05_0.9-1.0, TP05_2.4-2.5, TP06_0.5-0.6, TP06_3.4-3.5, TP07_0-0.1, TP07_2.9-3.0, QA100, QA200, QA300, QA400	**09-Oct-2024**	**14-Oct-2024**	23-Oct-2024	✓	**16-Oct-2024**	23-Oct-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP08_0.5-0.6, TP08_3.0-3.1, TP09_1.4-1.5, TP09_3.5-3.6, TP10_2.7-2.8, TP11_0-0.1, TP11_2.2-2.3, TP12_1.0-1.1, TP12_3.1-3.2	**10-Oct-2024**	**14-Oct-2024**	24-Oct-2024	✓	**16-Oct-2024**	24-Oct-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
TP01_3.0-3.1, TP03_1.9-2.0, TP05_2.4-2.5, TP07_2.9-3.0, QA100	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
HDPE Soil Jar (EP231X)							
TP09_3.5-3.6, TP12_3.1-3.2	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
TP01_3.0-3.1, TP03_1.9-2.0, TP05_2.4-2.5, TP07_2.9-3.0, QA100	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
HDPE Soil Jar (EP231X)							
TP09_3.5-3.6, TP12_3.1-3.2	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
TP01_3.0-3.1, TP03_1.9-2.0, TP05_2.4-2.5, TP07_2.9-3.0, QA100	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
HDPE Soil Jar (EP231X)							
TP09_3.5-3.6, TP12_3.1-3.2	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓

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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
TP01_3.0-3.1, TP03_1.9-2.0, TP05_2.4-2.5, TP07_2.9-3.0, QA100	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
HDPE Soil Jar (EP231X)							
TP09_3.5-3.6, TP12_3.1-3.2	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
TP01_3.0-3.1, TP03_1.9-2.0, TP05_2.4-2.5, TP07_2.9-3.0, QA100	**09-Oct-2024**	**15-Oct-2024**	07-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓
HDPE Soil Jar (EP231X)							
TP09_3.5-3.6, TP12_3.1-3.2	**10-Oct-2024**	**15-Oct-2024**	08-Apr-2025	✓	**16-Oct-2024**	24-Nov-2024	✓

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	5	53	**9.43**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	31	**12.90**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH field/fox	EA003	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	5	36	**13.89**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	6	36	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	31	**12.90**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	35	**11.43**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	35	**5.71**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	35	**5.71**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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*	
Matrix Spikes (MS) - Continued							
Total Mercury by FIMS	EG035T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	36	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	31	**6.45**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	35	**5.71**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH field/fox	EA003	SOIL	In house: Referenced to Ahern et al 1998 - determined on a 1:5 soil/water extract designed to simulate field measured pH and pH after the extract has been oxidised with peroxide.
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
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).
Volatile Organic Compounds	EP074	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. This method is 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.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Drying only	EN020D	SOIL	In house
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.
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.

SAMPLES RECEIVED WITHOUT COC

CLIENT: Stantec	CARRIER: ATC
PROJECT / QUOTE: 305001663	CONNOTE #:
CONTACT NAME:	AWB #:
CONTACT NUMBER:	# OF ESKIES: 3 SECURITY SEAL: Y N (N/A)
SAMPLER NAME:	TYPE OF ESKIES: Large
SAMPLER NUMBER:	ESKY NUMBERS:
SAMPLES RECEIVED BY:	# OF SAMPLES:
DATE/TIME RECEIVED: 11/10/24 CLIENT SERVICES NOTIFIED BY:	TEMPERATURE: 6.2°C, 3.8°C, 4.9°C

Environmental Division
Sydney
Work Order Reference
ES2433290

Telephone : +61-2-8784 8555

1800

LAB ID	SAMPLE ID	DATE	MATRIX	NUMBER OF CONTAINERS
1	BH12_1-5	11/10/24	S	
2	BH12_0.1	"	"	
3	BH203_10.0	"	"	
4	BH203_3.0	"	"	
5				

ADDITIONAL INFORMATION / COMMENTS:

OTHER INFORMATION:

- ☐ MICRO
- ☐ BIOSECURITY
- ☐ BROKEN CONTAINERS
- ☐ COC EMAILED
- ☐ ALS COMPASS

CORRESPONDENCE (DATE, INITIALS - DETAILS OF CORRESPONDENCE):

SAMPLES RECEIVED WITHOUT COC

CLIENT: Stantec	CARRIER: ATC
PROJECT / QUOTE:	CONNOTE #:
CONTACT NAME:	AWB #:
CONTACT NUMBER:	# OF ESKIES: 2 SECURITY SEAL: Y N (N/A)
SAMPLER NAME:	TYPE OF ESKIES: Large
SAMPLER NUMBER:	ESKY NUMBERS: FR1504, 505
SAMPLES RECEIVED BY:	# OF SAMPLES:
DATE/TIME RECEIVED: 25/10/24 1428 CLIENT SERVICES NOTIFIED BY:	TEMPERATURE: 4.8°C, 6.7°C, 6.3°C

Environmental Division
Sydney
Work Order Reference
ES2434893

Telephone : +61-2-8784 8555

LAB ID	SAMPLE DETAILS: SAMPLE ID	DATE	MATRIX	NUMBER OF CONTAINERS	ADDITIONAL INFORMATION / COMMENTS: OTHER INFORMATION:
					☐ MICRO
					☐ BIOSECURITY
					☐ BROKEN CONTAINERS
					☐ COC EMAILED
					☐ ALS COMPASS
1	MW02	25/10/24	W		
2	MW04	"	"		
3	QC100	"	"		
4					
5					

CORRESPONDENCE (DATE, INITIALS - DETAILS OF CORRESPONDENCE):

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2434893**		
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: michael.koerner@stantec.com	E-mail	: khaleda.ataei@alsglobal.com
Telephone	: ----	Telephone	: + 61 2 8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 305001663 SINSW Geo & Contamination	Page	: 1 of 2
Order number	: 305001663	Quote number	: ES2024MWHAUS0006 (ES24MWHAUS0006)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	:		

Dates

Date Samples Received	: 25-Oct-2024 14:28	Issue Date	: 29-Oct-2024
Client Requested Due Date	: 01-Nov-2024	Scheduled Reporting Date	: **01-Nov-2024**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 2	Temperature	: 4.8°C , 6.7°C & 6.3°C - Ice present
Receipt Detail	:	No. of samples received / analysed	: 7 / 7

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- NT-01&-02 can not be conducted for samples #1 &2 as green bottle was not provided
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **QC100 to be forwarded to Envirolab**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP132B(PAH) Ultra Trace Polynuclear Aromatic Compounds	WATER - EP231X-SUT PFAS - Super Ultra Trace Waters Long Suite (30	WATER - NT-01 & 02 Ca, Mg, Na, K, Cl, SO4, Alkalinity	WATER - UTO-10W Utratrace OC and OP (extended), PCB Pesticides	WATER - W-04 TRH/BTEXN	WATER - W-05T TRH/BTEXN/8 Metals (Total)
ES2434893-001	25-Oct-2024 00:00	MW01	✓	✓		✓		✓
ES2434893-002	25-Oct-2024 00:00	MW02	✓	✓		✓		✓
ES2434893-003	25-Oct-2024 00:00	MW03	✓	✓	✓	✓		✓
ES2434893-004	25-Oct-2024 00:00	MW04	✓	✓	✓	✓		✓
ES2434893-005	25-Oct-2024 00:00	MW05	✓	✓	✓	✓		✓
ES2434893-006	25-Oct-2024 00:00	QA100	✓	✓		✓		✓
ES2434893-007	25-Oct-2024 00:00	RIN_241025	✓	✓		✓	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ACCOUNTS ADDRESS

- A4 - AU Tax Invoice (INV)	Email	sapinvoices@stantec.com

FINN TANISH

- *AU Certificate of Analysis - NATA (COA)	Email	finn.tanish@stantec.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	finn.tanish@stantec.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	finn.tanish@stantec.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	finn.tanish@stantec.com
- Chain of Custody (CoC) (COC)	Email	finn.tanish@stantec.com
- EDI Format - ESDAT (ESDAT)	Email	finn.tanish@stantec.com
- EDI Format - XTab (XTAB)	Email	finn.tanish@stantec.com

MICHAEL KOERNER

- *AU Certificate of Analysis - NATA (COA)	Email	michael.koerner@stantec.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	michael.koerner@stantec.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	michael.koerner@stantec.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	michael.koerner@stantec.com
- Chain of Custody (CoC) (COC)	Email	michael.koerner@stantec.com
- EDI Format - ESDAT (ESDAT)	Email	michael.koerner@stantec.com
- EDI Format - XTab (XTAB)	Email	michael.koerner@stantec.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2434893**	Page	: 1 of 21
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW Geo & Contamination	Date Samples Received	: 25-Oct-2024 14:28
Order number	: 305001663	Date Analysis Commenced	: 29-Oct-2024
C-O-C number	: ----	Issue Date	: 01-Nov-2024 16:43
Sampler	: ----		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 7		
No. of samples analysed	: 7		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, 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.

- EP131A: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- As per QWI – EN55-3 Data Interpreting Procedures, Ionic balances are typically calculated using Major Anions - Chloride, Alkalinity and Sulfate; and Major Cations - Calcium, Magnesium, Potassium and Sodium. Where applicable and dependent upon sample matrix, the Ionic Balance may also include the additional contribution of Ammonia, Dissolved Metals by ICPMS and H+ to the Cations and Nitrate, SiO2 and Fluoride to the Anions.
- EP234: Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
- EG020: Results for sample ES2434893-#006 have been confirmed by reanalysis.
- EP132: Where reported, Total PAH reported as the sum of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene and Benzo(g,h,i)perylene.
- Sodium Adsorption Ratio (where reported): Where results for Na, Ca or Mg are <LOR, a concentration at half the reported LOR is incorporated into the SAR calculation. This represents a conservative approach for Na relative to the assumption that <LOR = zero concentration and a conservative approach for Ca & Mg relative to the assumption that <LOR is equivalent to the LOR concentration.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.
- ED045G: The presence of Thiocyanate, Thiosulfate and Sulfite can positively contribute to the chloride result, thereby may bias results higher than expected. Results should be scrutinised accordingly.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW01	MW02	MW03	MW04	MW05
			Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
				Result	Result	Result	Result	Result
ED037P: Alkalinity by PC Titrator								
Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	<1	<1	234
Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	<1	<1	108
Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	42	7	482	402	<1
Total Alkalinity as CaCO3	----	1	mg/L	42	7	482	402	342
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA								
Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	8	3	142	645	143
ED045G: Chloride by Discrete Analyser								
Chloride	16887-00-6	1	mg/L	69	4670	3670	1130	519
ED093F: Dissolved Major Cations								
Calcium	7440-70-2	1	mg/L	11	190	35	121	73
Magnesium	7439-95-4	1	mg/L	6	643	110	122	<1
Sodium	7440-23-5	1	mg/L	48	1770	2430	839	438
Potassium	7440-09-7	1	mg/L	5	8	3	7	64
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	0.002
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.0004	<0.0001	0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	<0.001	0.100	0.002	0.004	<0.001
Nickel	7440-02-0	0.001	mg/L	0.008	0.349	0.061	0.039	0.005
Lead	7439-92-1	0.001	mg/L	<0.001	0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L	0.025	0.298	0.016	0.133	<0.005
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	0.0011
EN055: Ionic Balance								
ø Total Anions	----	0.01	meq/L	2.95	132	116	53.3	24.4
ø Total Cations	----	0.01	meq/L	3.26	140	116	52.8	24.3
ø Ionic Balance	----	0.01	%	4.93	2.82	0.20	0.55	0.24

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	100	µg/L		<100	<100	<100	<100	<100
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L		<100	<100	<100	<100	<100
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L		<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L		<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
^ Total Xylenes	----	2	µg/L		<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L		<1	<1	<1	<1	<1
Naphthalene	91-20-3	5	µg/L		<5	<5	<5	<5	<5
EP131A: Organochlorine Pesticides									
Aldrin	309-00-2	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
alpha-BHC	319-84-6	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
beta-BHC	319-85-7	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP131A: Organochlorine Pesticides - Continued									
delta-BHC	319-86-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
4.4`-DDD	72-54-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
4.4`-DDE	72-55-9	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
4.4`-DDT	50-29-3	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Dieldrin	60-57-1	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
alpha-Endosulfan	959-98-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
beta-Endosulfan	33213-65-9	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Endosulfan sulfate	1031-07-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
^ **Endosulfan (sum)**	115-29-7	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Endrin	72-20-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Endrin aldehyde	7421-93-4	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Endrin ketone	53494-70-5	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Heptachlor	76-44-8	0.005	µg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor epoxide	1024-57-3	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Hexachlorobenzene (HCB)	118-74-1	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
gamma-BHC - (Lindane)	58-89-9	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Methoxychlor	72-43-5	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
cis-Chlordane	5103-71-9	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
trans-Chlordane	5103-74-2	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
^ **Total Chlordane (sum)**	----	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
Oxychlordane	27304-13-8	0.010	µg/L		<0.010	<0.010	<0.010	<0.010	<0.010
EP131B: Polychlorinated Biphenyls (as Aroclors)									
Total Polychlorinated biphenyls	----	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1016	12674-11-2	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1221	11104-28-2	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	<0.10

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW01	MW02	MW03	MW04	MW05
			Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
				Result	Result	Result	Result	Result
EP131B: Polychlorinated Biphenyls (as Aroclors) - Continued								
Aroclor 1232	11141-16-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1242	53469-21-9	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1248	12672-29-6	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1254	11097-69-1	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
Aroclor 1260	11096-82-5	0.10	µg/L	<0.10	<0.10	<0.10	<0.10	<0.10
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP132B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
^ **Sum of PAHs**	----	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Benzo(a)pyrene TEQ (zero)**	----	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L		**0.0019**	**0.0017**	<0.0005	**0.0020**	<0.0005
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L		**0.0006**	**0.0006**	<0.0005	<0.0005	<0.0005
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L		**0.0030**	**0.0038**	<0.0005	**0.0035**	**0.0133**
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L		**0.0013**	**0.0017**	**0.0006**	**0.0109**	**0.0105**
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L		**0.0034**	**0.0070**	<0.0020	**0.0112**	<0.0020
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L		<0.0005	<0.0005	<0.0005	**0.0057**	<0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L		<0.0005	<0.0005	<0.0005	**0.0008**	**0.0014**
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L		<0.0005	**0.0010**	<0.0005	**0.0027**	**0.0185**
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	**0.0028**	**0.0058**
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L		**0.020**	**0.037**	**0.016**	**0.262**	**0.010**
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L		<0.001	<0.001	<0.001	<0.001	<0.001
EP231P: PFAS Sums									
^ **Sum of PFHxS and PFOS**	355-46-4/1763-23-1	0.0002	µg/L		**0.0043**	**0.0055**	**0.0006**	**0.0144**	**0.0238**
^ **Sum of PFAS (WA DER List)**	----	0.0002	µg/L		**0.0296**	**0.0522**	**0.0166**	**0.302**	**0.0595**
^ **Sum of PFAS**	----	0.0002	µg/L		**0.0302**	**0.0528**	**0.0166**	**0.302**	**0.0595**
EP234A: OP Pesticides									

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP234A: OP Pesticides - Continued									
Acephate	30560-19-1	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Azinphos-methyl	86-50-0	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Azinphos-ethyl	2642-71-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Bensulide	741-58-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	4824-78-6	0.10	µg/L		<0.10	<0.10	<0.10	<0.10	<0.10
Carbofenothion	786-19-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Chlorfenvinphos	470-90-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Chlorpyrifos	2921-88-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Chlorpyrifos-methyl	5598-13-0	0.2	µg/L		<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	56-72-4	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Demeton-O	298-03-3	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Demeton-S	126-75-0	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Demeton-S-methyl	919-86-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Diazinon	333-41-5	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Dichlorvos	62-73-7	0.20	µg/L		<0.20	<0.20	<0.20	<0.20	<0.20
Dimethoate	60-51-5	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Disulfoton	298-04-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EPN	2104-64-5	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Ethoprophos	13194-48-4	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Fenamiphos	22224-92-6	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Fenchlorphos (Ronnel)	299-84-3	10	µg/L		<10	<10	<10	<10	<10
Fenitrothion	122-14-5	2	µg/L		<2	<2	<2	<2	<2
Fensulfothion	115-90-2	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Fenthion	55-38-9	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Formothion	2540-82-1	20	µg/L		<20	<20	<20	<20	<20

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	MW01	MW02	MW03	MW04	MW05
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit		ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
					Result	Result	Result	Result	Result
EP234A: OP Pesticides - Continued									
Fosetyl Aluminium	39148-24-8	10	µg/L		<10	<10	<10	<10	<10
Malathion	121-75-5	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Methidathion	950-37-8	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	7786-34-7	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Monocrotophos	6923-22-4	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Naftalofos	1491-41-4	1.0	µg/L		<1.0	<1.0	<1.0	<1.0	<1.0
Omethoate	1113-02-6	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Parathion	56-38-2	0.2	µg/L		<0.2	<0.2	<0.2	<0.2	<0.2
Parathion-methyl	298-00-0	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Phorate	298-02-2	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Pirimiphos-ethyl	23505-41-1	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Pirimiphos-methyl	29232-93-7	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Profenofos	41198-08-7	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Prothiofos	34643-46-4	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Pyrazophos	13457-18-6	0.1	µg/L		<0.1	<0.1	<0.1	<0.1	<0.1
Sulfotep	3689-24-5	0.005	µg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Sulprofos	35400-43-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Temephos	3383-96-8	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Terbufos	13071-79-9	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Tetrachlorvinphos	22248-79-9	0.01	µg/L		<0.01	<0.01	<0.01	<0.01	<0.01
Thiometon	640-15-3	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Triazophos	24017-47-8	0.005	µg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Trichlorfon	52-68-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
Trichloronate	327-98-0	0.5	µg/L		<0.5	<0.5	<0.5	<0.5	<0.5
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**108**	**82.5**	**112**	**102**	**113**
Toluene-D8	2037-26-5	2	%		**103**	**80.1**	**100**	**98.4**	**99.6**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	MW01	MW02	MW03	MW04	MW05
			Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00	25-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2434893-001	ES2434893-002	ES2434893-003	ES2434893-004	ES2434893-005
				Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	2	%	104	76.4	101	92.1	104
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.010	%	113	108	112	117	116
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.10	%	115	111	118	121	118
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	109	93.5	80.6	76.1	64.8
Anthracene-d10	1719-06-8	0.1	%	112	100	89.5	82.2	74.6
4-Terphenyl-d14	1718-51-0	0.1	%	117	106	99.8	86.6	79.8
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.0005	%	93.6	100	102	98.6	98.8
13C8-PFOA	----	0.0005	%	90.5	104	95.6	94.8	93.2

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		**0.0002**	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		**0.012**	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		**0.094**	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		**0.208**	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		----	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		----	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L		----	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L		----	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L		----	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L		----	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L		----	<0.005	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		----	<0.0001	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	<50	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	<100	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		<100	<100	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	----	----	----
Toluene	108-88-3	2	µg/L		<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	<2	----	----	----
^ **Total Xylenes**	----	2	µg/L		<2	<2	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	<5	----	----	----
EP131A: Organochlorine Pesticides									
Aldrin	309-00-2	0.010	µg/L		<0.010	<0.010	----	----	----
alpha-BHC	319-84-6	0.010	µg/L		<0.010	<0.010	----	----	----
beta-BHC	319-85-7	0.010	µg/L		<0.010	<0.010	----	----	----
delta-BHC	319-86-8	0.010	µg/L		<0.010	<0.010	----	----	----
4.4`-DDD	72-54-8	0.010	µg/L		<0.010	<0.010	----	----	----
4.4`-DDE	72-55-9	0.010	µg/L		<0.010	<0.010	----	----	----
4.4`-DDT	50-29-3	0.010	µg/L		<0.010	<0.010	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.010	µg/L		<0.010	<0.010	----	----	----
Dieldrin	60-57-1	0.010	µg/L		<0.010	<0.010	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP131A: Organochlorine Pesticides - Continued									
alpha-Endosulfan	959-98-8	0.010	µg/L		<0.010	<0.010	----	----	----
beta-Endosulfan	33213-65-9	0.010	µg/L		<0.010	<0.010	----	----	----
Endosulfan sulfate	1031-07-8	0.010	µg/L		<0.010	<0.010	----	----	----
^ Endosulfan (sum)	115-29-7	0.010	µg/L		<0.010	<0.010	----	----	----
Endrin	72-20-8	0.010	µg/L		<0.010	<0.010	----	----	----
Endrin aldehyde	7421-93-4	0.010	µg/L		<0.010	<0.010	----	----	----
Endrin ketone	53494-70-5	0.010	µg/L		<0.010	<0.010	----	----	----
Heptachlor	76-44-8	0.005	µg/L		<0.005	<0.005	----	----	----
Heptachlor epoxide	1024-57-3	0.010	µg/L		<0.010	<0.010	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.010	µg/L		<0.010	<0.010	----	----	----
gamma-BHC - (Lindane)	58-89-9	0.010	µg/L		<0.010	<0.010	----	----	----
Methoxychlor	72-43-5	0.010	µg/L		<0.010	<0.010	----	----	----
cis-Chlordane	5103-71-9	0.010	µg/L		<0.010	<0.010	----	----	----
trans-Chlordane	5103-74-2	0.010	µg/L		<0.010	<0.010	----	----	----
^ Total Chlordane (sum)	----	0.010	µg/L		<0.010	<0.010	----	----	----
Oxychlordane	27304-13-8	0.010	µg/L		<0.010	<0.010	----	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors)									
Total Polychlorinated biphenyls	----	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1016	12674-11-2	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1221	11104-28-2	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1232	11141-16-5	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1242	53469-21-9	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1248	12672-29-6	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1254	11097-69-1	0.10	µg/L		<0.10	<0.10	----	----	----
Aroclor 1260	11096-82-5	0.10	µg/L		<0.10	<0.10	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L		<0.1	<0.1	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons - Continued									
2-Methylnaphthalene	91-57-6	0.1	µg/L		<0.1	<0.1	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L		<0.1	<0.1	----	----	----
Acenaphthene	83-32-9	0.1	µg/L		<0.1	<0.1	----	----	----
Acenaphthylene	208-96-8	0.1	µg/L		<0.1	<0.1	----	----	----
Anthracene	120-12-7	0.1	µg/L		<0.1	<0.1	----	----	----
Benz(a)anthracene	56-55-3	0.1	µg/L		<0.1	<0.1	----	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/L		<0.05	<0.05	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L		<0.1	<0.1	----	----	----
Benzo(e)pyrene	192-97-2	0.1	µg/L		<0.1	<0.1	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L		<0.1	<0.1	----	----	----
Benzo(k)fluoranthene	207-08-9	0.1	µg/L		<0.1	<0.1	----	----	----
Chrysene	218-01-9	0.1	µg/L		<0.1	<0.1	----	----	----
Coronene	191-07-1	0.1	µg/L		<0.1	<0.1	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L		<0.1	<0.1	----	----	----
Fluoranthene	206-44-0	0.1	µg/L		<0.1	<0.1	----	----	----
Fluorene	86-73-7	0.1	µg/L		<0.1	<0.1	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L		<0.1	<0.1	----	----	----
Naphthalene	91-20-3	0.1	µg/L		<0.1	<0.1	----	----	----
Perylene	198-55-0	0.1	µg/L		<0.1	<0.1	----	----	----
Phenanthrene	85-01-8	0.1	µg/L		<0.1	<0.1	----	----	----
Pyrene	129-00-0	0.1	µg/L		<0.1	<0.1	----	----	----
^ **Sum of PAHs**	----	0.05	µg/L		<0.05	<0.05	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.05	µg/L		<0.05	<0.05	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0020	µg/L		<0.0020	<0.0020	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L		**0.0017**	<0.0005	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued									
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L		**0.0033**	<0.0005	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L		**0.0092**	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L		<0.0005	<0.0005	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.0020	µg/L		**0.0102**	<0.0020	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L		**0.0057**	<0.0005	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L		**0.0007**	<0.0005	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L		**0.0022**	<0.0005	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L		**0.0026**	<0.0005	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L		<0.0005	<0.0005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L		<0.001	<0.001	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L		<0.001	<0.001	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L		<0.001	<0.001	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L		<0.001	<0.001	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L		<0.0005	<0.0005	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L		<0.001	<0.001	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L		**0.186**	**0.015**	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L		<0.001	<0.001	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L		<0.001	<0.001	----	----	----
EP231P: PFAS Sums									
^ **Sum of PFHxS and PFOS**	355-46-4/1763-23-1	0.0002	µg/L		**0.0125**	<0.0002	----	----	----
^ **Sum of PFAS (WA DER List)**	----	0.0002	µg/L		**0.222**	**0.0150**	----	----	----
^ **Sum of PFAS**	----	0.0002	µg/L		**0.222**	**0.0150**	----	----	----
EP234A: OP Pesticides									
Acephate	30560-19-1	0.5	µg/L		<0.5	<0.5	----	----	----
Azinphos-methyl	86-50-0	0.02	µg/L		<0.02	<0.02	----	----	----
Azinphos-ethyl	2642-71-9	0.02	µg/L		<0.02	<0.02	----	----	----
Bensulide	741-58-2	0.1	µg/L		<0.1	<0.1	----	----	----
Bromophos-ethyl	4824-78-6	0.10	µg/L		<0.10	<0.10	----	----	----
Carbofenothion	786-19-6	0.02	µg/L		<0.02	<0.02	----	----	----
Chlorfenvinphos	470-90-6	0.02	µg/L		<0.02	<0.02	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP234A: OP Pesticides - Continued									
Chlorpyrifos	2921-88-2	0.02	µg/L		<0.02	<0.02	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.2	µg/L		<0.2	<0.2	----	----	----
Coumaphos	56-72-4	0.01	µg/L		<0.01	<0.01	----	----	----
Demeton-O	298-03-3	0.02	µg/L		<0.02	<0.02	----	----	----
Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L		<0.02	<0.02	----	----	----
Demeton-S	126-75-0	0.02	µg/L		<0.02	<0.02	----	----	----
Demeton-S-methyl	919-86-8	0.02	µg/L		<0.02	<0.02	----	----	----
Diazinon	333-41-5	0.01	µg/L		<0.01	<0.01	----	----	----
Dichlorvos	62-73-7	0.20	µg/L		<0.20	<0.20	----	----	----
Dimethoate	60-51-5	0.02	µg/L		<0.02	<0.02	----	----	----
Disulfoton	298-04-4	0.05	µg/L		<0.05	<0.05	----	----	----
EPN	2104-64-5	0.05	µg/L		<0.05	<0.05	----	----	----
Ethion	563-12-2	0.02	µg/L		<0.02	<0.02	----	----	----
Ethoprophos	13194-48-4	0.01	µg/L		<0.01	<0.01	----	----	----
Fenamiphos	22224-92-6	0.01	µg/L		<0.01	<0.01	----	----	----
Fenchlorphos (Ronnel)	299-84-3	10	µg/L		<10	<10	----	----	----
Fenitrothion	122-14-5	2	µg/L		<2	<2	----	----	----
Fensulfothion	115-90-2	0.01	µg/L		<0.01	<0.01	----	----	----
Fenthion	55-38-9	0.05	µg/L		<0.05	<0.05	----	----	----
Formothion	2540-82-1	20	µg/L		<20	<20	----	----	----
Fosetyl Aluminium	39148-24-8	10	µg/L		<10	<10	----	----	----
Malathion	121-75-5	0.02	µg/L		<0.02	<0.02	----	----	----
Methidathion	950-37-8	0.1	µg/L		<0.1	<0.1	----	----	----
Mevinphos	7786-34-7	0.02	µg/L		<0.02	<0.02	----	----	----
Monocrotophos	6923-22-4	0.02	µg/L		<0.02	<0.02	----	----	----
Naftalofos	1491-41-4	1.0	µg/L		<1.0	<1.0	----	----	----
Omethoate	1113-02-6	0.01	µg/L		<0.01	<0.01	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP234A: OP Pesticides - Continued									
Parathion	56-38-2	0.2	µg/L		<0.2	<0.2	----	----	----
Parathion-methyl	298-00-0	0.5	µg/L		<0.5	<0.5	----	----	----
Phorate	298-02-2	0.1	µg/L		<0.1	<0.1	----	----	----
Pirimiphos-ethyl	23505-41-1	0.01	µg/L		<0.01	<0.01	----	----	----
Pirimiphos-methyl	29232-93-7	0.01	µg/L		<0.01	<0.01	----	----	----
Profenofos	41198-08-7	0.01	µg/L		<0.01	<0.01	----	----	----
Prothiofos	34643-46-4	0.1	µg/L		<0.1	<0.1	----	----	----
Pyrazophos	13457-18-6	0.1	µg/L		<0.1	<0.1	----	----	----
Sulfotep	3689-24-5	0.005	µg/L		<0.005	<0.005	----	----	----
Sulprofos	35400-43-2	0.05	µg/L		<0.05	<0.05	----	----	----
Temephos	3383-96-8	0.02	µg/L		<0.02	<0.02	----	----	----
Terbufos	13071-79-9	0.01	µg/L		<0.01	<0.01	----	----	----
Tetrachlorvinphos	22248-79-9	0.01	µg/L		<0.01	<0.01	----	----	----
Thiometon	640-15-3	0.5	µg/L		<0.5	<0.5	----	----	----
Triazophos	24017-47-8	0.005	µg/L		<0.005	<0.005	----	----	----
Trichlorfon	52-68-6	0.02	µg/L		<0.02	<0.02	----	----	----
Trichloronate	327-98-0	0.5	µg/L		<0.5	<0.5	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**102**	**99.3**	----	----	----
Toluene-D8	2037-26-5	2	%		**101**	**94.3**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**93.5**	**88.3**	----	----	----
EP131S: OC Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.010	%		**116**	**115**	----	----	----
EP131T: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.10	%		**120**	**115**	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**85.5**	**82.7**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	QA100	RIN_241025	----	----	----
				Sampling date / time	25-Oct-2024 00:00	25-Oct-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2434893-006	ES2434893-007	--------	--------	--------
					Result	Result	----	----	----
EP132T: Base/Neutral Extractable Surrogates - Continued									
Anthracene-d10	1719-06-8	0.1	%		**88.2**	**84.5**	**----**	**----**	**----**
4-Terphenyl-d14	1718-51-0	0.1	%		**92.6**	**90.7**	**----**	**----**	**----**
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0005	%		**96.4**	**93.0**	**----**	**----**	**----**
13C8-PFOA	----	0.0005	%		**97.9**	**101**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	14	166
EP131T: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	144
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	135
Anthracene-d10	1719-06-8	48	138
4-Terphenyl-d14	1718-51-0	48	144
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2434893**	Page	: 1 of 24
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW Geo & Contamination	Date Samples Received	: 25-Oct-2024
Order number	: 305001663	Date Analysis Commenced	: 29-Oct-2024
C-O-C number	: ----	Issue Date	: 01-Nov-2024
Sampler	: ----		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 7		
No. of samples analysed	: 7		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, 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.

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
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
ED037P: Alkalinity by PC Titrator (QC Lot: 6155370)									
EN2413718-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	9	9	0.0	No Limit
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	9	9	0.0	No Limit
ED2400079-001	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	7450	7390	0.8	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	7450	7390	0.8	0% - 20%
ED037P: Alkalinity by PC Titrator (QC Lot: 6155375)									
ES2434893-003	MW03	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	482	487	0.9	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	482	487	0.9	0% - 20%
ES2435124-002	Anonymous	ED037-P: Hydroxide Alkalinity as CaCO3	DMO-210-001	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Carbonate Alkalinity as CaCO3	3812-32-6	1	mg/L	<1	<1	0.0	No Limit
		ED037-P: Bicarbonate Alkalinity as CaCO3	71-52-3	1	mg/L	38	41	6.3	0% - 20%
		ED037-P: Total Alkalinity as CaCO3	----	1	mg/L	38	41	6.3	0% - 20%
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6154017)									
ES2434819-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	106	103	3.1	0% - 20%
ES2434645-006	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	120	121	0.0	0% - 20%

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QC Lot: 6154018)									
ES2434945-002	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	<1	0.0	No Limit
ED045G: Chloride by Discrete Analyser (QC Lot: 6154016)									
ES2434945-002	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	5	5	0.0	No Limit
ES2434645-006	Anonymous	ED045G: Chloride	16887-00-6	1	mg/L	115	117	1.8	0% - 20%
ED093F: Dissolved Major Cations (QC Lot: 6153897)									
ES2434820-001	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	176	174	0.9	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	143	142	1.0	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	605	609	0.6	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	54	53	0.0	0% - 20%
ES2434838-002	Anonymous	ED093F: Calcium	7440-70-2	1	mg/L	69	69	0.0	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	54	55	2.7	0% - 20%
		ED093F: Sodium	7440-23-5	1	mg/L	266	269	1.3	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	2	2	0.0	No Limit
ED093F: Dissolved Major Cations (QC Lot: 6153900)									
ES2434893-005	MW05	ED093F: Calcium	7440-70-2	1	mg/L	73	78	6.6	0% - 20%
		ED093F: Magnesium	7439-95-4	1	mg/L	<1	<1	0.0	No Limit
		ED093F: Sodium	7440-23-5	1	mg/L	438	441	0.7	0% - 20%
		ED093F: Potassium	7440-09-7	1	mg/L	64	65	1.7	0% - 20%
EG020F: Dissolved Metals by ICP-MS (QC Lot: 6153898)									
ES2434863-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.012	0.012	0.0	0% - 50%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	0.011	0.012	0.0	0% - 50%
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.007	0.006	0.0	No Limit
ES2434893-005	MW05	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
EG020T: Total Metals by ICP-MS (QC Lot: 6152730)									
ES2434095-002	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020T: Total Metals by ICP-MS (QC Lot: 6152730) - continued									
ES2434095-002	Anonymous	EG020A-T: Copper	7440-50-8	0.001	mg/L	0.009	0.009	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.005	0.004	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.039	0.040	0.0	No Limit
ES2434521-007	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.004	0.005	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.003	0.003	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.005	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 6153899)									
ES2434838-006	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2434893-006	QA100	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6152734)									
ES2434521-002	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2434839-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6151086)									
ES2434893-001	MW01	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6151176)									
EN2413671-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2434893-006	QA100	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6151086)									
ES2434893-001	MW01	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C16 - C34 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6151176)									
EN2413671-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2434893-006	QA100	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 6151176)									
EN2413671-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 6151176) - continued									
EN2413671-001	Anonymous	EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2434893-006	QA100	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP131A: Organochlorine Pesticides (QC Lot: 6151087)									
ES2434893-001	MW01	EP131A: Heptachlor	76-44-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP131A: Aldrin	309-00-2	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: alpha-BHC	319-84-6	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: beta-BHC	319-85-7	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: delta-BHC	319-86-8	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: 4.4`-DDD	72-54-8	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: 4.4`-DDE	72-55-9	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: 4.4`-DDT	50-29-3	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Dieldrin	60-57-1	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Endrin	72-20-8	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Endosulfan (sum)	115-29-7	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: gamma-BHC - (Lindane)	58-89-9	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Methoxychlor	72-43-5	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Total Chlordane (sum)	----	0.01	µg/L	<0.010	<0.010	0.0	No Limit
		EP131A: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.01	µg/L	<0.010	<0.010	0.0	No Limit
EP131B: Polychlorinated Biphenyls (as Aroclors) (QC Lot: 6151088)									
ES2434893-001	MW01	EP131B: Total Polychlorinated biphenyls	----	0.1	µg/L	<0.10	<0.10	0.0	No Limit
EP132B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6151085)									

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP132B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6151085) - continued									
ES2434893-001	MW01	EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Perylene	198-55-0	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6155123)									
ES2434808-001	Anonymous	EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6155123) - continued									
ES2434808-003	Anonymous	EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6155123)									
ES2434808-001	Anonymous	EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
ES2434808-003	Anonymous	EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6155123) - continued									
ES2434808-003	Anonymous	EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	<0.0020	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6155123)									
ES2434808-001	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
ES2434808-003	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	<0.0005	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6155123)									
ES2434808-001	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6155123) - continued									
ES2434808-003	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	<0.001	0.0	No Limit
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	<0.001	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6155123)									
ES2434808-001	Anonymous	EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
ES2434808-003	Anonymous	EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
		EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	<0.0002	<0.0002	0.0	No Limit
EP234A: OP Pesticides (QC Lot: 6150632)									
ES2434972-001	Anonymous	EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP234A: OP Pesticides (QC Lot: 6150632) - continued									
ES2434972-001	Anonymous	EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	<0.10	0.0	No Limit
		EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	<0.20	0.0	No Limit
		EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Parathion-methyl	298-00-0	0.5 (2.0)*	µg/L	<2.0	<2.0	0.0	No Limit
		EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	0.0	No Limit
		EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	<2	0.0	No Limit
ES2434939-001	Anonymous	EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP234A: OP Pesticides (QC Lot: 6150632) - continued									
ES2434939-001	Anonymous	EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	<0.10	0.0	No Limit
		EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	<0.20	0.0	No Limit
		EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	<0.2	0.0	No Limit
		EP234-1: Parathion-methyl	298-00-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	<10	0.0	No Limit
		EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	<2	0.0	No Limit
EP234A: OP Pesticides (QC Lot: 6150633)									
ES2434972-001	Anonymous	EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	<10	0.0	No Limit
		EP234-1x: Formothion	2540-82-1	20	µg/L	<20	<20	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP234A: OP Pesticides (QC Lot: 6150633) - continued									
ES2434939-001	Anonymous	EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	<1.0	0.0	No Limit
		EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	<10	0.0	No Limit
		EP234-1x: Formothion	2540-82-1	20	µg/L	<20	<20	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
ED037P: Alkalinity by PC Titrator (QCLot: 6155370)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	101	81.0	115
				----	50 mg/L	108	80.0	128
ED037P: Alkalinity by PC Titrator (QCLot: 6155375)								
ED037-P: Total Alkalinity as CaCO3	----	----	mg/L	----	200 mg/L	101	81.0	115
				----	50 mg/L	107	80.0	128
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6154017)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	104	82.0	122
				<1	500 mg/L	102	82.0	122
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6154018)								
ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	1	mg/L	<1	25 mg/L	104	82.0	122
				<1	500 mg/L	113	82.0	122
ED045G: Chloride by Discrete Analyser (QCLot: 6154016)								
ED045G: Chloride	16887-00-6	1	mg/L	<1	50 mg/L	96.8	80.9	127
				<1	1000 mg/L	98.4	80.9	127
ED093F: Dissolved Major Cations (QCLot: 6153897)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	99.2	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	108	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	102	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	103	85.0	113
ED093F: Dissolved Major Cations (QCLot: 6153900)								
ED093F: Calcium	7440-70-2	1	mg/L	<1	50 mg/L	98.6	80.0	114
ED093F: Magnesium	7439-95-4	1	mg/L	<1	50 mg/L	107	90.0	116
ED093F: Sodium	7440-23-5	1	mg/L	<1	50 mg/L	103	82.0	120
ED093F: Potassium	7440-09-7	1	mg/L	<1	50 mg/L	103	85.0	113
EG020F: Dissolved Metals by ICP-MS (QCLot: 6153898)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	94.8	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	92.2	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	100	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.5	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	93.9	83.0	111

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 6153898) - continued								
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	94.7	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	95.0	81.0	117
EG020T: Total Metals by ICP-MS (QCLot: 6152730)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.2	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	100.0	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	101	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	95.6	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	96.6	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	94.9	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	96.7	79.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 6153899)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	96.5	83.0	105
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6152734)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.5	77.0	111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6151086)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	68.4	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	70.9	63.3	107
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	78.4	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6151176)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	78.5	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6151086)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	71.2	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	72.8	57.8	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	87.0	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6151176)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	77.9	75.0	127
EP080: BTEXN (QCLot: 6151176)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	84.6	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	94.5	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	97.0	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	104	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	102	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	114	75.5	124

Sub-Matrix: **WATER**

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
EP131A: Organochlorine Pesticides (QCLot: 6151087)								
EP131A: Aldrin	309-00-2	0.01	µg/L	<0.010	1.1 µg/L	98.5	34.0	145
EP131A: alpha-BHC	319-84-6	0.01	µg/L	<0.010	1.1 µg/L	94.2	27.2	131
EP131A: beta-BHC	319-85-7	0.01	µg/L	<0.010	1.1 µg/L	82.2	28.6	133
EP131A: delta-BHC	319-86-8	0.01	µg/L	<0.010	1.1 µg/L	93.1	36.0	131
EP131A: 4.4`-DDD	72-54-8	0.01	µg/L	<0.010	1.1 µg/L	96.7	36.0	142
EP131A: 4.4`-DDE	72-55-9	0.01	µg/L	<0.010	1.1 µg/L	86.7	30.4	112
EP131A: 4.4`-DDT	50-29-3	0.01	µg/L	<0.010	1.1 µg/L	64.3	29.5	142
EP131A: Dieldrin	60-57-1	0.01	µg/L	<0.010	1.1 µg/L	89.0	28.1	122
EP131A: alpha-Endosulfan	959-98-8	0.01	µg/L	<0.010	1.1 µg/L	97.0	34.0	119
EP131A: beta-Endosulfan	33213-65-9	0.01	µg/L	<0.010	1.1 µg/L	95.9	31.6	128
EP131A: Endosulfan sulfate	1031-07-8	0.01	µg/L	<0.010	1.1 µg/L	61.1	35.0	159
EP131A: Endrin	72-20-8	0.01	µg/L	<0.010	1.1 µg/L	82.6	21.5	165
EP131A: Endosulfan (sum)	115-29-7	0.01	µg/L	<0.010	----	----	----	----
EP131A: Endrin aldehyde	7421-93-4	0.01	µg/L	<0.010	1.1 µg/L	82.6	22.7	123
EP131A: Endrin ketone	53494-70-5	0.01	µg/L	<0.010	1.1 µg/L	93.0	16.3	144
EP131A: Heptachlor	76-44-8	0.005	µg/L	<0.005	1.1 µg/L	85.8	33.0	160
EP131A: Heptachlor epoxide	1024-57-3	0.01	µg/L	<0.010	1.1 µg/L	100.0	33.0	117
EP131A: Hexachlorobenzene (HCB)	118-74-1	0.01	µg/L	<0.010	1.1 µg/L	78.1	23.6	126
EP131A: gamma-BHC - (Lindane)	58-89-9	0.01	µg/L	<0.010	1.1 µg/L	91.4	28.7	134
EP131A: Methoxychlor	72-43-5	0.01	µg/L	<0.010	1.1 µg/L	81.2	29.5	150
EP131A: cis-Chlordane	5103-71-9	0.01	µg/L	<0.010	1.1 µg/L	104	27.0	116
EP131A: trans-Chlordane	5103-74-2	0.01	µg/L	<0.010	1.1 µg/L	93.9	31.2	119
EP131A: Total Chlordane (sum)	----	0.01	µg/L	<0.010	----	----	----	----
EP131A: Sum of DDD + DDE + DDT	72-54-8/72-5 5-9/50-2	0.01	µg/L	<0.010	----	----	----	----
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 6151088)								
EP131B: Total Polychlorinated biphenyls	----	0.1	µg/L	<0.10	----	----	----	----
EP131B: Aroclor 1254	11097-69-1	----	µg/L	----	1 µg/L	107	51.0	133
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6151085)								
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	87.5	60.0	120
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	77.4	59.0	123
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	90.4	36.0	144
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	80.8	64.0	122
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	82.7	64.0	126

Sub-Matrix: **WATER**

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
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6151085) - continued								
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	83.7	65.0	127
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	87.5	64.0	130
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	85.5	64.0	126
EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.1	µg/L	<0.1	2 µg/L	86.8	62.0	126
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	85.8	62.0	126
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	85.4	56.0	126
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	85.5	68.0	130
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	85.5	66.0	130
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	85.0	35.0	133
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	84.6	58.0	128
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	85.2	65.0	127
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	83.1	64.0	124
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	85.8	57.0	127
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	74.6	54.0	128
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	84.8	66.0	130
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	82.8	65.0	129
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	85.0	66.0	128
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6155123)								
EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.002	µg/L	<0.0020	0.004 µg/L	105	70.0	130
EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0005	µg/L	<0.0005	0.004 µg/L	96.0	72.0	130
EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0005	µg/L	<0.0005	0.004 µg/L	97.4	71.0	127
EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0005	µg/L	<0.0005	0.004 µg/L	85.9	68.0	131
EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0005	µg/L	<0.0005	0.004 µg/L	108	69.0	134
EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	µg/L	<0.0002	0.004 µg/L	88.8	65.0	140
EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0005	µg/L	<0.0005	0.004 µg/L	114	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6155123)								
EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.002	µg/L	<0.0020	0.02 µg/L	90.7	73.0	129
EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0005	µg/L	<0.0005	0.004 µg/L	102	72.0	129
EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0005	µg/L	<0.0005	0.004 µg/L	101	72.0	129
EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0005	µg/L	<0.0005	0.004 µg/L	93.4	72.0	130
EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.0005	µg/L	<0.0005	0.004 µg/L	85.0	71.0	133
EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.0005	µg/L	<0.0005	0.004 µg/L	93.2	69.0	130
EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.0005	µg/L	<0.0005	0.004 µg/L	93.0	71.0	129

Sub-Matrix: **WATER**

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
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6155123) - continued								
EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	96.8	69.0	133
EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0005	µg/L	<0.0005	0.004 µg/L	105	72.0	134
EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0005	µg/L	<0.0005	0.004 µg/L	75.5	65.0	144
EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	µg/L	<0.0005	0.01 µg/L	103	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6155123)								
EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0005	µg/L	<0.0005	0.004 µg/L	102	67.0	137
EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.001	µg/L	<0.001	0.01 µg/L	112	68.0	141
EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.001	µg/L	<0.001	0.01 µg/L	105	56.6	136
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.001	µg/L	<0.001	0.01 µg/L	112	61.9	129
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.001	µg/L	<0.001	0.01 µg/L	118	52.8	135
EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0005	µg/L	<0.0005	0.004 µg/L	118	65.0	136
EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0005	µg/L	<0.0005	0.004 µg/L	95.6	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6155123)								
EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.001	µg/L	<0.001	0.004 µg/L	79.5	63.0	143
EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.001	µg/L	<0.001	0.004 µg/L	111	64.0	140
EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.001	µg/L	<0.001	0.004 µg/L	94.8	67.0	138
EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.001	µg/L	<0.001	0.004 µg/L	83.2	60.9	136
EP231P: PFAS Sums (QCLot: 6155123)								
EP231X-SUT: Sum of PFHxS and PFOS	355-46-4/17 63-23-1	0.0002	µg/L	<0.0002	----	----	----	----
EP231X-SUT: Sum of PFAS (WA DER List)	----	0.0002	µg/L	<0.0002	----	----	----	----
EP231X-SUT: Sum of PFAS	----	0.0002	µg/L	<0.0002	----	----	----	----
EP234A: OP Pesticides (QCLot: 6150632)								
EP234-1: Azinphos-methyl	86-50-0	0.02	µg/L	<0.02	0.2 µg/L	103	77.0	129
EP234-1: Azinphos-ethyl	2642-71-9	0.02	µg/L	<0.02	0.2 µg/L	105	75.0	135
EP234-1: Bromophos-ethyl	4824-78-6	0.1	µg/L	<0.10	1 µg/L	93.8	70.0	130
EP234-1: Carbofenothion	786-19-6	0.02	µg/L	<0.02	0.2 µg/L	107	70.0	130
EP234-1: Chlorfenvinphos	470-90-6	0.02	µg/L	<0.02	0.2 µg/L	102	74.0	134
EP234-1: Chlorpyrifos	2921-88-2	0.02	µg/L	<0.02	0.2 µg/L	100	70.0	130
EP234-1: Chlorpyrifos-methyl	5598-13-0	0.2	µg/L	<0.2	2 µg/L	89.0	70.0	130

Sub-Matrix: **WATER**

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
EP234A: OP Pesticides (QCLot: 6150632) - continued								
EP234-1: Coumaphos	56-72-4	0.01	µg/L	<0.01	0.1 µg/L	101	70.0	130
EP234-1: Demeton-O	298-03-3	0.02	µg/L	<0.02	0.05 µg/L	106	64.0	134
EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.02	µg/L	<0.02	0.1 µg/L	103	79.0	127
EP234-1: Demeton-S	126-75-0	0.02	µg/L	<0.02	0.05 µg/L	99.2	63.0	135
EP234-1: Demeton-S-methyl	919-86-8	0.02	µg/L	<0.02	0.2 µg/L	110	70.0	128
EP234-1: Diazinon	333-41-5	0.01	µg/L	<0.01	0.1 µg/L	102	68.0	138
EP234-1: Dichlorvos	62-73-7	0.2	µg/L	<0.20	2 µg/L	107	76.0	128
EP234-1: Dimethoate	60-51-5	0.02	µg/L	<0.02	0.2 µg/L	107	75.0	127
EP234-1: Disulfoton	298-04-4	0.05	µg/L	<0.05	0.5 µg/L	108	72.0	134
EP234-1: EPN	2104-64-5	0.05	µg/L	<0.05	0.5 µg/L	105	70.0	130
EP234-1: Ethion	563-12-2	0.02	µg/L	<0.02	0.2 µg/L	97.8	70.0	130
EP234-1: Ethoprophos	13194-48-4	0.01	µg/L	<0.01	0.1 µg/L	99.8	78.0	128
EP234-1: Fenamiphos	22224-92-6	0.01	µg/L	<0.01	0.1 µg/L	100	71.0	135
EP234-1: Fenchlorphos (Ronnel)	299-84-3	10	µg/L	<10	100 µg/L	116	70.0	130
EP234-1: Fenitrothion	122-14-5	2	µg/L	<2	20 µg/L	86.8	64.0	136
EP234-1: Fensulfothion	115-90-2	0.01	µg/L	<0.01	0.1 µg/L	106	79.0	125
EP234-1: Fenthion	55-38-9	0.05	µg/L	<0.05	0.5 µg/L	97.3	70.0	130
EP234-1: Malathion	121-75-5	0.02	µg/L	<0.02	0.2 µg/L	100	70.0	130
EP234-1: Mevinphos	7786-34-7	0.02	µg/L	<0.02	0.2 µg/L	106	77.0	123
EP234-1: Monocrotophos	6923-22-4	0.02	µg/L	<0.02	0.2 µg/L	111	75.0	129
EP234-1: Omethoate	1113-02-6	0.01	µg/L	<0.01	0.1 µg/L	98.3	74.0	130
EP234-1: Parathion	56-38-2	0.2	µg/L	<0.2	2 µg/L	97.9	69.0	139
EP234-1: Parathion-methyl	298-00-0	0.5	µg/L	<0.5	20 µg/L	121	66.0	140
EP234-1: Phorate	298-02-2	0.1	µg/L	<0.1	1 µg/L	97.7	68.0	136
EP234-1: Pirimiphos-ethyl	23505-41-1	0.01	µg/L	<0.01	0.1 µg/L	99.2	70.0	130
EP234-1: Pirimiphos-methyl	29232-93-7	0.01	µg/L	<0.01	0.1 µg/L	101	71.0	137
EP234-1: Profenofos	41198-08-7	0.01	µg/L	<0.01	0.1 µg/L	101	70.0	130
EP234-1: Prothiofos	34643-46-4	0.1	µg/L	<0.1	1 µg/L	118	70.0	130
EP234-1: Sulfotep	3689-24-5	0.005	µg/L	<0.005	0.05 µg/L	104	71.0	137
EP234-1: Sulprofos	35400-43-2	0.05	µg/L	<0.05	0.5 µg/L	104	70.0	130
EP234-1: Temephos	3383-96-8	0.02	µg/L	<0.02	0.2 µg/L	97.0	70.0	130
EP234-1: Terbufos	13071-79-9	0.01	µg/L	<0.01	0.1 µg/L	95.2	70.0	130
EP234-1: Tetrachlorvinphos	22248-79-9	0.01	µg/L	<0.01	0.1 µg/L	103	74.0	128
EP234-1: Triazophos	24017-47-8	0.005	µg/L	<0.005	0.05 µg/L	116	77.0	131

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP234A: OP Pesticides (QCLot: 6150632) - continued								
EP234-1: Trichlorfon	52-68-6	0.02	µg/L	<0.02	0.2 µg/L	84.3	70.0	130
EP234-1: Trichloronate	327-98-0	0.5	µg/L	<0.5	5 µg/L	107	63.0	139
EP234A: OP Pesticides (QCLot: 6150633)								
EP234-1x: Acephate	30560-19-1	0.5	µg/L	<0.5	2.5 µg/L	108	70.0	130
EP234-1x: Bensulide	741-58-2	0.1	µg/L	<0.1	2.5 µg/L	108	70.0	130
EP234-1x: Formothion	2540-82-1	20	µg/L	<20	----	----	----	----
EP234-1x: Fosetyl Aluminium	39148-24-8	10	µg/L	<10	2.5 µg/L	127	70.0	130
EP234-1x: Methidathion	950-37-8	0.1	µg/L	<0.1	2.5 µg/L	110	70.0	130
EP234-1x: Naftalofos	1491-41-4	1	µg/L	<1.0	2.5 µg/L	93.5	70.0	130
EP234-1x: Pyrazophos	13457-18-6	0.1	µg/L	<0.1	2.5 µg/L	113	70.0	130
EP234-1x: Thiometon	640-15-3	0.5	µg/L	<0.5	2.5 µg/L	110	70.0	130

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6154017)							
ES2434645-006	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	# Not Determined	70.0	130
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA (QCLot: 6154018)							
ES2434945-001	Anonymous	ED041G: Sulfate as SO4 - Turbidimetric	14808-79-8	10 mg/L	120	70.0	130
ED045G: Chloride by Discrete Analyser (QCLot: 6154016)							
ES2434645-006	Anonymous	ED045G: Chloride	16887-00-6	250 mg/L	93.6	70.0	130
EG020F: Dissolved Metals by ICP-MS (QCLot: 6153898)							
ES2434838-005	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	98.4	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	93.5	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	101	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	95.0	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	100	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	95.9	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	95.7	70.0	130
EG020T: Total Metals by ICP-MS (QCLot: 6152730)							
ES2434292-006	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	92.6	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG020T: Total Metals by ICP-MS (QCLot: 6152730) - continued							
ES2434292-006	Anonymous	EG020A-T: Cadmium	7440-43-9	0.25 mg/L	97.9	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	101	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	94.2	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	95.2	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	92.8	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	93.8	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 6153899)							
ES2434838-004	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	88.8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6152734)							
ES2434521-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	104	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6151086)							
ES2434893-002	MW02	EP071: C10 - C14 Fraction	----	200 µg/L	103	70.0	130
		EP071: C15 - C28 Fraction	----	250 µg/L	72.8	71.0	130
		EP071: C29 - C36 Fraction	----	200 µg/L	101	67.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6151176)							
EN2413671-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	81.3	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6151086)							
ES2434893-002	MW02	EP071: >C10 - C16 Fraction	----	250 µg/L	88.8	70.0	130
		EP071: >C16 - C34 Fraction	----	350 µg/L	86.7	75.0	130
		EP071: >C34 - C40 Fraction	----	150 µg/L	110	67.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6151176)							
EN2413671-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	80.3	70.0	130
EP080: BTEXN (QCLot: 6151176)							
EN2413671-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	98.8	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	92.8	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	96.0	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	96.5	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	96.3	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	110	70.0	130
EP131A: Organochlorine Pesticides (QCLot: 6151087)							
ES2434893-002	MW02	EP131A: Aldrin	309-00-2	1.1 µg/L	93.3	35.8	139
		EP131A: alpha-BHC	319-84-6	1.1 µg/L	92.0	19.7	153
		EP131A: beta-BHC	319-85-7	1.1 µg/L	80.7	43.8	136
		EP131A: delta-BHC	319-86-8	1.1 µg/L	90.1	37.4	144
		EP131A: 4.4`-DDD	72-54-8	1.1 µg/L	88.3	37.5	145

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP131A: Organochlorine Pesticides (QCLot: 6151087) - continued							
ES2434893-002	MW02	EP131A: 4.4`-DDE	72-55-9	1.1 µg/L	67.5	30.5	146
		EP131A: 4.4`-DDT	50-29-3	1.1 µg/L	79.7	31.0	151
		EP131A: Dieldrin	60-57-1	1.1 µg/L	85.2	34.4	145
		EP131A: alpha-Endosulfan	959-98-8	1.1 µg/L	92.8	30.2	141
		EP131A: beta-Endosulfan	33213-65-9	1.1 µg/L	93.2	30.3	148
		EP131A: Endosulfan sulfate	1031-07-8	1.1 µg/L	60.6	19.1	150
		EP131A: Endrin	72-20-8	1.1 µg/L	94.8	13.0	165
		EP131A: Endrin aldehyde	7421-93-4	1.1 µg/L	79.5	28.3	134
		EP131A: Endrin ketone	53494-70-5	1.1 µg/L	90.9	15.1	146
		EP131A: Heptachlor	76-44-8	1.1 µg/L	86.1	33.2	148
		EP131A: Heptachlor epoxide	1024-57-3	1.1 µg/L	96.1	36.0	143
		EP131A: Hexachlorobenzene (HCB)	118-74-1	1.1 µg/L	88.3	14.0	146
		EP131A: gamma-BHC - (Lindane)	58-89-9	1.1 µg/L	89.9	27.2	147
		EP131A: Methoxychlor	72-43-5	1.1 µg/L	70.9	34.4	150
		EP131A: cis-Chlordane	5103-71-9	1.1 µg/L	99.5	15.4	152
		EP131A: trans-Chlordane	5103-74-2	1.1 µg/L	88.4	45.1	140
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 6151088)							
ES2434893-002	MW02	EP131B: Aroclor 1254	11097-69-1	1 µg/L	91.2	61.6	123
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6151085)							
ES2434893-002	MW02	EP132: 3-Methylcholanthrene	56-49-5	2 µg/L	88.0	59.0	115
		EP132: 2-Methylnaphthalene	91-57-6	2 µg/L	73.7	46.0	120
		EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	2 µg/L	93.0	21.0	135
		EP132: Acenaphthene	83-32-9	2 µg/L	76.2	62.0	114
		EP132: Acenaphthylene	208-96-8	2 µg/L	79.4	61.0	119
		EP132: Anthracene	120-12-7	2 µg/L	81.4	68.0	116
		EP132: Benz(a)anthracene	56-55-3	2 µg/L	87.4	67.0	122
		EP132: Benzo(a)pyrene	50-32-8	2 µg/L	84.1	72.0	114
		EP132: Benzo(b+j)fluoranthene	205-99-2 205-82-3	2 µg/L	85.0	69.0	119
		EP132: Benzo(e)pyrene	192-97-2	2 µg/L	84.3	71.0	119
		EP132: Benzo(g.h.i)perylene	191-24-2	2 µg/L	83.9	49.0	133
		EP132: Benzo(k)fluoranthene	207-08-9	2 µg/L	83.0	71.0	124
		EP132: Chrysene	218-01-9	2 µg/L	84.4	70.0	118
		EP132: Coronene	191-07-1	2 µg/L	82.5	29.0	138
		EP132: Dibenz(a.h)anthracene	53-70-3	2 µg/L	83.0	60.0	122
		EP132: Fluoranthene	206-44-0	2 µg/L	84.2	65.0	121
		EP132: Fluorene	86-73-7	2 µg/L	78.2	63.0	118
		EP132: Indeno(1.2.3.cd)pyrene	193-39-5	2 µg/L	84.6	57.0	123
		EP132: Naphthalene	91-20-3	2 µg/L	70.6	53.0	115

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 6151085) - continued							
ES2434893-002	MW02	EP132: Perylene	198-55-0	2 µg/L	83.2	71.0	118
		EP132: Phenanthrene	85-01-8	2 µg/L	80.1	67.0	120
		EP132: Pyrene	129-00-0	2 µg/L	83.9	70.0	117
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6155123)							
ES2434808-002	Anonymous	EP231X-SUT: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.004 µg/L	96.9	70.0	130
		EP231X-SUT: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.004 µg/L	92.6	72.0	130
		EP231X-SUT: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.004 µg/L	91.9	71.0	127
		EP231X-SUT: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.004 µg/L	78.8	68.0	131
		EP231X-SUT: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.004 µg/L	96.5	69.0	134
		EP231X-SUT: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.004 µg/L	76.2	65.0	140
		EP231X-SUT: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.004 µg/L	96.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6155123)							
ES2434808-002	Anonymous	EP231X-SUT: Perfluorobutanoic acid (PFBA)	375-22-4	0.02 µg/L	82.7	73.0	129
		EP231X-SUT: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.004 µg/L	96.1	72.0	129
		EP231X-SUT: Perfluorohexanoic acid (PFHxA)	307-24-4	0.004 µg/L	92.4	72.0	129
		EP231X-SUT: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.004 µg/L	81.2	72.0	130
		EP231X-SUT: Perfluorooctanoic acid (PFOA)	335-67-1	0.004 µg/L	81.0	71.0	133
		EP231X-SUT: Perfluorononanoic acid (PFNA)	375-95-1	0.004 µg/L	97.4	69.0	130
		EP231X-SUT: Perfluorodecanoic acid (PFDA)	335-76-2	0.004 µg/L	89.0	71.0	129
		EP231X-SUT: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.004 µg/L	75.3	69.0	133
		EP231X-SUT: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.004 µg/L	79.5	72.0	134
		EP231X-SUT: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.004 µg/L	80.0	65.0	144
		EP231X-SUT: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.01 µg/L	75.5	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6155123)							
ES2434808-002	Anonymous	EP231X-SUT: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.004 µg/L	83.9	67.0	137
		EP231X-SUT: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.01 µg/L	91.5	68.0	141
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.01 µg/L	93.6	56.6	136
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.01 µg/L	97.5	61.9	129
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.01 µg/L	107	52.8	135
		EP231X-SUT: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.004 µg/L	102	65.0	136
		EP231X-SUT: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.004 µg/L	77.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6155123)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6155123) - continued							
ES2434808-002	Anonymous	EP231X-SUT: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.004 µg/L	85.0	63.0	143
		EP231X-SUT: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.004 µg/L	95.2	64.0	140
		EP231X-SUT: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.004 µg/L	81.7	67.0	138
		EP231X-SUT: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.004 µg/L	65.8	60.9	136
EP234A: OP Pesticides (QCLot: 6150632)							
ES2434972-001	Anonymous	EP234-1: Azinphos-methyl	86-50-0	0.2 µg/L	96.0	70.0	130
		EP234-1: Azinphos-ethyl	2642-71-9	0.2 µg/L	102	70.0	130
		EP234-1: Bromophos-ethyl	4824-78-6	1 µg/L	109	70.0	130
		EP234-1: Carbofenothion	786-19-6	0.2 µg/L	104	70.0	130
		EP234-1: Chlorfenvinphos	470-90-6	0.2 µg/L	98.8	70.0	130
		EP234-1: Chlorpyrifos	2921-88-2	0.2 µg/L	95.3	70.0	130
		EP234-1: Chlorpyrifos-methyl	5598-13-0	2 µg/L	87.4	58.0	136
		EP234-1: Coumaphos	56-72-4	0.1 µg/L	104	70.0	130
		EP234-1: Demeton-O	298-03-3	0.05 µg/L	103	70.0	130
		EP234-1: Demeton-O & Demeton-S	298-03-3/126-75-0	0.1 µg/L	98.4	69.0	129
		EP234-1: Demeton-S	126-75-0	0.05 µg/L	94.0	70.0	130
		EP234-1: Demeton-S-methyl	919-86-8	0.2 µg/L	106	70.0	130
		EP234-1: Diazinon	333-41-5	0.1 µg/L	100	70.0	130
		EP234-1: Dichlorvos	62-73-7	2 µg/L	107	70.0	130
		EP234-1: Dimethoate	60-51-5	0.2 µg/L	89.0	69.0	131
		EP234-1: Disulfoton	298-04-4	0.5 µg/L	91.2	70.0	130
		EP234-1: EPN	2104-64-5	0.5 µg/L	95.8	70.0	130
		EP234-1: Ethion	563-12-2	0.2 µg/L	98.0	70.0	130
		EP234-1: Ethoprophos	13194-48-4	0.1 µg/L	105	70.0	132
		EP234-1: Fenamiphos	22224-92-6	0.1 µg/L	94.8	70.0	130
		EP234-1: Fenchlorphos (Ronnel)	299-84-3	100 µg/L	112	71.0	133
		EP234-1: Fenitrothion	122-14-5	20 µg/L	83.1	64.0	136
		EP234-1: Fensulfothion	115-90-2	0.1 µg/L	109	83.0	123
		EP234-1: Fenthion	55-38-9	0.5 µg/L	95.1	70.0	130
		EP234-1: Malathion	121-75-5	0.2 µg/L	100	70.0	130
		EP234-1: Mevinphos	7786-34-7	0.2 µg/L	110	69.0	125
		EP234-1: Monocrotophos	6923-22-4	0.2 µg/L	86.1	70.0	128
		EP234-1: Omethoate	1113-02-6	0.1 µg/L	104	70.0	130
		EP234-1: Parathion	56-38-2	2 µg/L	92.2	70.0	130
		EP234-1: Parathion-methyl	298-00-0	20 µg/L	# 60.3	70.0	140
		EP234-1: Phorate	298-02-2	1 µg/L	99.2	70.0	130
		EP234-1: Pirimiphos-ethyl	23505-41-1	0.1 µg/L	98.8	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP234A: OP Pesticides (QCLot: 6150632) - continued							
ES2434972-001	Anonymous	EP234-1: Pirimiphos-methyl	29232-93-7	0.1 µg/L	97.3	70.0	130
		EP234-1: Profenofos	41198-08-7	0.1 µg/L	92.7	70.0	130
		EP234-1: Prothiofos	34643-46-4	1 µg/L	# 176	70.0	130
		EP234-1: Sulfotep	3689-24-5	0.05 µg/L	101	63.0	135
		EP234-1: Sulprofos	35400-43-2	0.5 µg/L	110	70.0	130
		EP234-1: Temephos	3383-96-8	0.2 µg/L	100.0	70.0	130
		EP234-1: Terbufos	13071-79-9	0.1 µg/L	94.6	70.0	130
		EP234-1: Tetrachlorvinphos	22248-79-9	0.1 µg/L	100	77.0	125
		EP234-1: Triazophos	24017-47-8	0.05 µg/L	110	74.0	132
		EP234-1: Trichlorfon	52-68-6	0.2 µg/L	# 226	70.0	130
		EP234-1: Trichloronate	327-98-0	5 µg/L	116	63.0	139
EP234A: OP Pesticides (QCLot: 6150633)							
ES2434972-001	Anonymous	EP234-1x: Acephate	30560-19-1	2.5 µg/L	105	70.0	130
		EP234-1x: Bensulide	741-58-2	2.5 µg/L	111	70.0	130
		EP234-1x: Fosetyl Aluminium	39148-24-8	2.5 µg/L	# 36.5	70.0	130
		EP234-1x: Methidathion	950-37-8	2.5 µg/L	107	70.0	130
		EP234-1x: Naftalofos	1491-41-4	2.5 µg/L	108	70.0	130
		EP234-1x: Pyrazophos	13457-18-6	2.5 µg/L	106	70.0	130
		EP234-1x: Thiometon	640-15-3	2.5 µg/L	96.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2434893**	Page	: 1 of 11
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001663 SINSW Geo & Contamination	Date Samples Received	: 25-Oct-2024
Site	: ----	Issue Date	: 01-Nov-2024
Sampler	: ----	No. of samples received	: 7
Order number	: 305001663	No. of samples analysed	: 7

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.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **For all regular sample matrices, where applicable to the methodology, 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.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA	ES2434645--006	Anonymous	**Sulfate as SO4 - Turbidimetric**	14808-79-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP234A: OP Pesticides	ES2434972--001	Anonymous	**Parathion-methyl**	298-00-0	60.3 %	70.0-140%	**Recovery less than lower data quality objective**
EP234A: OP Pesticides	ES2434972--001	Anonymous	**Prothiofos**	34643-46-4	176 %	70.0-130%	**Recovery greater than upper data quality objective**
EP234A: OP Pesticides	ES2434972--001	Anonymous	**Trichlorfon**	52-68-6	226 %	70.0-130%	**Recovery greater than upper data quality objective**
EP234A: OP Pesticides	ES2434972--001	Anonymous	**Fosetyl Aluminium**	39148-24-8	36.5 %	70.0-130%	**Recovery less than lower data quality objective**

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED037P: Alkalinity by PC Titrator							
Amber Glass Bottle - Unpreserved (ED037-P)							
MW01, MW02	**25-Oct-2024**	**----**	----	**----**	**30-Oct-2024**	08-Nov-2024	✓
Clear Plastic Bottle - Natural (ED037-P)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	**----**	**30-Oct-2024**	08-Nov-2024	✓
ED041G: Sulfate (Turbidimetric) as SO4 2- by DA							
Amber Glass Bottle - Unpreserved (ED041G)							
MW01, MW02	**25-Oct-2024**	**----**	----	**----**	**30-Oct-2024**	22-Nov-2024	✓
Clear Plastic Bottle - Natural (ED041G)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	**----**	**30-Oct-2024**	22-Nov-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
ED045G: Chloride by Discrete Analyser							
Amber Glass Bottle - Unpreserved (ED045G)							
MW01, MW02	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	22-Nov-2024	✓
Clear Plastic Bottle - Natural (ED045G)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	22-Nov-2024	✓
ED093F: Dissolved Major Cations							
Amber Glass Bottle - Unpreserved (ED093F)							
MW01, MW02	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	01-Nov-2024	✓
Clear Plastic Bottle - Natural (ED093F)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	01-Nov-2024	✓
EG020F: Dissolved Metals by ICP-MS							
Amber Glass Bottle - Unpreserved (EG020A-F)							
MW01, MW02, QA100	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	23-Apr-2025	✓
Clear Plastic Bottle - Natural (EG020A-F)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	----	**30-Oct-2024**	23-Apr-2025	✓
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
RIN_241025	**25-Oct-2024**	**29-Oct-2024**	23-Apr-2025	✓	**29-Oct-2024**	23-Apr-2025	✓
EG035F: Dissolved Mercury by FIMS							
Amber Glass Bottle - Unpreserved (EG035F)							
MW01, MW02, QA100	**25-Oct-2024**	**----**	----	----	**31-Oct-2024**	08-Nov-2024	✓
Clear Plastic Bottle - Natural (EG035F)							
MW03, MW04, MW05	**25-Oct-2024**	**----**	----	----	**31-Oct-2024**	22-Nov-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RIN_241025	**25-Oct-2024**	**----**	----	----	**31-Oct-2024**	22-Nov-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
QA100	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**01-Nov-2024**	08-Dec-2024	✓
Amber Glass Bottle - Unpreserved (EP071)							
MW01, MW02, MW03, MW04, MW05, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**31-Oct-2024**	08-Dec-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	08-Nov-2024	✓	**29-Oct-2024**	08-Nov-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
QA100	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**01-Nov-2024**	08-Dec-2024	✓
Amber Glass Bottle - Unpreserved (EP071)							
MW01, MW02, MW03, MW04, MW05, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**31-Oct-2024**	08-Dec-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	08-Nov-2024	✓	**29-Oct-2024**	08-Nov-2024	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	08-Nov-2024	✓	**29-Oct-2024**	08-Nov-2024	✓
EP131A: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved (EP131A)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**29-Oct-2024**	08-Dec-2024	✓
EP131B: Polychlorinated Biphenyls (as Aroclors)							
Amber Glass Bottle - Unpreserved (EP131B)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**29-Oct-2024**	08-Dec-2024	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP132B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP132)							
MW01, MW02, MW03, MW04, QA100, RIN_241025	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**30-Oct-2024**	08-Dec-2024	✓
Amber Glass Bottle - Unpreserved (EP132)							
MW05	**25-Oct-2024**	**29-Oct-2024**	01-Nov-2024	✓	**31-Oct-2024**	08-Dec-2024	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-SUT)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**31-Oct-2024**	23-Apr-2025	✓	**01-Nov-2024**	23-Apr-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-SUT)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**31-Oct-2024**	23-Apr-2025	✓	**01-Nov-2024**	23-Apr-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-SUT)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**31-Oct-2024**	23-Apr-2025	✓	**01-Nov-2024**	23-Apr-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-SUT)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**31-Oct-2024**	23-Apr-2025	✓	**01-Nov-2024**	23-Apr-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-SUT)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**31-Oct-2024**	23-Apr-2025	✓	**01-Nov-2024**	23-Apr-2025	✓

Matrix: **WATER**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP234A: OP Pesticides							
Amber Glass Bottle - Unpreserved (EP234-1)							
MW01, MW02, MW03, MW04, MW05, QA100, RIN_241025	**25-Oct-2024**	**----**	----	**----**	**29-Oct-2024**	01-Nov-2024	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Alkalinity by Auto Titrator	ED037-P	4	39	**10.26**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	3	21	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	2	8	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	3	28	**10.71**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Alkalinity by Auto Titrator	ED037-P	4	39	**10.26**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Chloride by Discrete Analyser	ED045G	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	4	28	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Chloride by Discrete Analyser	ED045G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Method Blanks (MB) - Continued							
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Major Cations - Dissolved	ED093F	2	21	**9.52**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	28	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Chloride by Discrete Analyser	ED045G	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Mercury by FIMS	EG035F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organochlorine Pesticides (Ultra-trace)	EP131A	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PCB's (Ultra-trace)	EP131B	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	2	28	**7.14**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Alkalinity by Auto Titrator	ED037-P	WATER	In house: Referenced to APHA 2320 B This procedure determines alkalinity by automated measurement (e.g. PC Titrate) on a settled supernatant aliquot of the sample using pH 4.5 for indicating the total alkalinity end-point. This method is compliant with NEPM Schedule B(3)
Sulfate (Turbidimetric) as SO4 2- by Discrete Analyser	ED041G	WATER	In house: Referenced to APHA 4500-SO4. Dissolved sulfate is determined in a 0.45um filtered sample. Sulfate ions are converted to a barium sulfate suspension in an acetic acid medium with barium chloride. Light absorbance of the BaSO4 suspension is measured by a photometer and the SO4-2 concentration is determined by comparison of the reading with a standard curve. This method is compliant with NEPM Schedule B(3)
Chloride by Discrete Analyser	ED045G	WATER	In house: Referenced to APHA 4500 Cl - G.The thiocyanate ion is liberated from mercuric thiocyanate through sequestration of mercury by the chloride ion to form non-ionised mercuric chloride. In the presence of ferric ions the liberated thiocynate forms highly-coloured ferric thiocynate which is measured at 480 nm.
Major Cations - Dissolved	ED093F	WATER	In house: Referenced to APHA 3120 and 3125; USEPA SW 846 - 6010 and 6020; Cations are determined by either ICP-AES or ICP-MS techniques. This method is compliant with NEPM Schedule B(3) Sodium Adsorption Ratio is calculated from Ca, Mg and Na which determined by ALS in house method QWI-EN/ED093F. This method is compliant with NEPM Schedule B(3) Hardness parameters are calculated based on APHA 2340 B. This method is compliant with NEPM Schedule B(3)
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Ionic Balance by PCT DA and Turbi SO4 DA	* EN055 - PG	WATER	In house: Referenced to APHA 1030E. This method is compliant with NEPM Schedule B(3)

Analytical Methods	Method	Matrix	Method Descriptions
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Organochlorine Pesticides (Ultra-trace)	EP131A	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup),3620 (Florisil), 8081/8082 (GC/µECD/uECD). This method is compliant with NEPM Schedule B(3)
PCB's (Ultra-trace)	EP131B	WATER	In house: Referenced to USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/µECD/µECD). This method is compliant with NEPM Schedule B(3)
Semivolatile Compounds by GCMS(SIM - Ultra-trace)	EP132	WATER	In house: Referenced to USEPA 3640 (GPC Cleanup), 8270 GCMS Capiliary column, SIM mode. This method is compliant with NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-SUT	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is concentrated, combined with an equal volume of reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.4, table B-15 requirements.
Pesticides by LCMSMS (Positive Ion Mode)	EP234-1	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.
Pesticides by LCMSMS (Positive Ion Mode) - extended	EP234-1x	WATER	In house: LC-MSMS, direct injection. A sample is filtered and injected directly onto the LC-MSMS. Analysis is by LC/MSMS, ESI Positive Mode.

Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction /Acetylation of Phenolic Compounds	ORG14-AC	WATER	In house: Referenced to USEPA 3510 (Extraction) / In-house (Acetylation): A 1L sample is extracted into dichloromethane and concentrated to 1 mL with echange into cyclohexane. Phenolic compounds are reacted with acetic anhydride to yield phenyl acetates suitable for ultra-trace analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Sep. Funnel Extraction of Liquids (Ultra-trace pesticides.)	ORG14-UTP	WATER	In house: Referenced to USEPA 3510 Samples are extracted into dichloromethane, concentrated and exchanged into an apporpriate solvent for GPC and florisil cleanup as required. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

Subcon / Forward Lab / Split WO:

Lab / Analysis: Brisbane - chromium suite

Organised By / Date: spoons

Relinquished By / Date:

Connote / Courier:

WO No:

Attached By PO / Internal Sheet:

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 558	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	Chromium Suite – Complete*	SPOCAS Suite – Complete*											Please freeze ASS samples
BH01	5	GJ, PJ, ASS Bag	10.10.24	Chill		X												Report ID ES2433214
BH03	4.5	GJ, PJ, ASS Bag	10.10.24	Chill		X	X											Report ID ES2433214
BH03	5.5	ASS Bag	10.10.24	Chill		X												Report ID ES2433214
BH202	6	ASS Bag	10.10.24	Chill		X												Report ID ES2433214
BH12	5.5	ASS Bag	10.11.24	Chill		X												Report ID ES2433290
					Total:	5	1	0	0	0	0	0	0	0	0			

1 2 3 4 5

Relinquished by: (name / company)	Michael Koerner Stantec	Received by: (name / company)	Thanh Le ACS	Relinquished by: (name / company)	Received by: (name / company)
Date & Time:	28/10/2024 15:05	Date & Time:	28/10/24 1813	Date & Time:	Date & Time:
Signature:	MK	Signature:		Signature:	Signature:

Environmental Division Sydney

Work Order Reference

ES2435028

Telephone : + 61-2-8784 8555

CERTIFICATE OF ANALYSIS

Work Order	: **ES2435028**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 28-Oct-2024 18:13
Order number	: ----	Date Analysis Commenced	: 05-Nov-2024
C-O-C number	: ----	Issue Date	: 05-Nov-2024 16:04
Sampler	: MK / FT		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

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.

- ASS: EA029 (SPOCAS): Analysis is performed as per the Acid Sulfate Soils Laboratory Methods Guidelines (2004), 4969.12-2009 Analysis of Acid Sulphate Soil and the updated National Acid Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual, Department of Agriculture and Water Resources, Canberra, ACT (2018)
- ASS: EA033 (CRS Suite): Analysis is performed as per the Acid Sulfate Soils Laboratory Methods Guidelines (2004) and the updated National Acid Sulfate Soils Guidance: National acid sulfate soils identification and laboratory methods manual, Department of Agriculture and Water Resources, Canberra, ACT (2018)
- ASS: EA033 (CRS Suite): ANC not required because pH KCl less than 6.5
- ASS: EA029 (SPOCAS): Excess ANC not required because pH OX less than 6.5.
- Rebatch of ES2433214 and ES2433290.
- ASS: EA033 (CRS Suite): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from 'kg/t dry weight' to 'kg/m3 in-situ soil', multiply 'reported results' x 'wet bulk density of soil in t/m3'.
- ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5	BH03_4.5	BH03_5.5	BH202_6	BH12_5.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	11-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2435028-001	ES2435028-002	ES2435028-003	ES2435028-004	ES2435028-005
				Result	Result	Result	Result	Result
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	----	**4.3**	----	----	----
pH OX (23B)	----	0.1	pH Unit	----	**4.8**	----	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	----	**56**	----	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	----	**59**	----	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	----	**2**	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	----	**0.091**	----	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	----	**0.094**	----	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	----	<0.020	----	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Sulfur (23De)	----	0.020	% S	----	<0.020	----	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	----	<0.020	----	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	----	<10	----	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	----	<0.020	----	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	----	<0.020	----	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	----	<0.020	----	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	----	<0.020	----	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	----	**0.078**	----	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	----	**0.080**	----	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	----	<0.020	----	----	----
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	----	<0.020	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5	BH03_4.5	BH03_5.5	BH202_6	BH12_5.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	11-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2435028-001	ES2435028-002	ES2435028-003	ES2435028-004	ES2435028-005
				Result	Result	Result	Result	Result
EA029-G: Retained Acidity								
HCl Extractable Sulfur (20Be)	----	0.020	% S	----	<0.020	----	----	----
Net Acid Soluble Sulfur (20Je)	----	0.020	% S	----	<0.020	----	----	----
acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	----	<10	----	----	----
sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.020	% pyrite S	----	<0.020	----	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	----	**1.5**	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	----	**0.09**	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	----	**56**	----	----	----
Liming Rate	----	1	kg CaCO3/t	----	**4**	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	----	**0.09**	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	----	**56**	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	----	**4**	----	----	----
EA033-A: Actual Acidity								
pH KCl (23A)	----	0.1	pH Unit	**5.9**	**4.3**	**4.4**	**4.3**	**6.0**
Titratable Actual Acidity (23F)	----	2	mole H+ / t	**5**	**56**	**36**	**62**	**3**
sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	**0.09**	**0.06**	**0.10**	<0.02
EA033-B: Potential Acidity								
Chromium Reducible Sulfur (22B)	----	0.005	% S	**0.029**	**0.017**	**0.021**	**0.025**	**0.019**
acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	**18**	**10**	**13**	**15**	**12**
EA033-D: Retained Acidity								
KCl Extractable Sulfur (23Ce)	----	0.02	% S	----	<0.02	<0.02	<0.02	----
HCl Extractable Sulfur (20Be)	----	0.02	% S	----	<0.02	<0.02	<0.02	----
Net Acid Soluble Sulfur (20Je)	----	0.02	% S	----	<0.02	<0.02	<0.02	----
acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	----	<10	<10	<10	----
sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	----	<0.02	<0.02	<0.02	----
EA033-E: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	**1.5**	**1.5**	**1.5**	**1.5**	**1.5**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_5	BH03_4.5	BH03_5.5	BH202_6	BH12_5.5
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	10-Oct-2024 00:00	11-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2435028-001	ES2435028-002	ES2435028-003	ES2435028-004	ES2435028-005
				Result	Result	Result	Result	Result
EA033-E: Acid Base Accounting - Continued								
Net Acidity (sulfur units)	----	0.02	% S	**0.04**	**0.11**	**0.08**	**0.12**	**0.02**
Net Acidity (acidity units)	----	10	mole H+ / t	**23**	**67**	**49**	**77**	**15**
Liming Rate	----	1	kg CaCO3/t	**2**	**5**	**4**	**6**	**1**
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	**0.04**	**0.11**	**0.08**	**0.12**	**0.02**
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	**23**	**67**	**49**	**77**	**15**
Liming Rate excluding ANC	----	1	kg CaCO3/t	**2**	**5**	**4**	**6**	**1**

Inter-Laboratory Testing

Analysis conducted by ALS Brisbane, NATA accreditation no. 825, site no. 818 (Chemistry / Biology).

(SOIL) EA033-B: Potential Acidity
(SOIL) EA033-C: Acid Neutralising Capacity
(SOIL) EA033-D: Retained Acidity
(SOIL) EA033-A: Actual Acidity
(SOIL) EA033-E: Acid Base Accounting
(SOIL) EA029-D: Calcium Values
(SOIL) EA029-E: Magnesium Values
(SOIL) EA029-F: Excess Acid Neutralising Capacity
(SOIL) EA029-H: Acid Base Accounting
(SOIL) EA029-G: Retained Acidity
(SOIL) EA029-A: pH Measurements
(SOIL) EA029-C: Sulfur Trail
(SOIL) EA029-B: Acidity Trail

QUALITY CONTROL REPORT

Work Order	: **ES2435028**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 28-Oct-2024
Order number	: ----	Date Analysis Commenced	: 05-Nov-2024
C-O-C number	: ----	Issue Date	: 05-Nov-2024
Sampler	: MK / FT		
Site	: ----		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

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 (%)*
EA029-A: pH Measurements (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: pH KCl (23A)	----	0.1	pH Unit	5.5	5.5	0.0	0% - 20%
		EA029: pH OX (23B)	----	0.1	pH Unit	5.4	5.5	1.8	0% - 20%
EA029-B: Acidity Trail (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	<0.020	0.0	No Limit
		EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	0.022	0.023	4.5	No Limit
		EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	<0.020	0.0	No Limit
		EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	3	3	0.0	No Limit
		EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	14	14	0.0	No Limit
		EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	11	12	0.0	No Limit
EA029-C: Sulfur Trail (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	<10	0.0	No Limit
EA029-D: Calcium Values (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	0.025	0.024	0.0	No Limit
		EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	0.030	0.026	15.5	No Limit
		EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	<0.020	0.0	No Limit
		EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	<10	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 (%)*
EA029-E: Magnesium Values (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	0.020	0.020	0.0	No Limit
		EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	0.022	0.021	7.4	No Limit
		EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	<0.020	0.0	No Limit
		EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	<0.020	0.0	No Limit
		EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	<10	0.0	No Limit
EA029-H: Acid Base Accounting (QC Lot: 6164255)									
ES2434704-006	Anonymous	EA029: ANC Fineness Factor	----	0.5	-	1.5	1.5	0.0	No Limit
		EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	0.0	No Limit
		EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	<0.02	0.0	No Limit
		EA029: Liming Rate	----	1	kg CaCO3/t	<1	<1	0.0	No Limit
		EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	<1	0.0	No Limit
		EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	<10	0.0	No Limit
		EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	<10	0.0	No Limit
EA033-A: Actual Acidity (QC Lot: 6164252)									
EB2437426-013	Anonymous	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.0	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.0	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	8.7	8.7	0.0	0% - 20%
ES2435028-005	BH12_5.5	EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	<0.02	0.0	No Limit
		EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	3	5	36.8	No Limit
		EA033: pH KCl (23A)	----	0.1	pH Unit	6.0	5.8	2.7	0% - 20%
EA033-B: Potential Acidity (QC Lot: 6164252)									
EB2437426-013	Anonymous	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.253	0.250	1.2	0% - 20%
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	158	156	1.2	0% - 50%
ES2435028-005	BH12_5.5	EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	0.019	0.022	15.2	No Limit
		EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	12	14	15.2	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
EA029-A: pH Measurements (QCLot: 6164255)								
EA029: pH KCl (23A)	----	0.1	pH Unit	<0.1	4.7 pH Unit	99.3	70.0	130
EA029: pH OX (23B)	----	0.1	pH Unit	<0.1	4.5 pH Unit	102	70.0	130
EA029-B: Acidity Trail (QCLot: 6164255)								
EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	23.5 mole H+ / t	109	70.0	130
EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	46.5 mole H+ / t	87.2	70.0	130
EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail (QCLot: 6164255)								
EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	0.04 % S	112	70.0	130
EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	0.105 % S	104	70.0	130
EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	----	----	----	----
EA029-D: Calcium Values (QCLot: 6164255)								
EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	<0.020	0.108 % Ca	108	70.0	130
EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	<0.020	0.1 % Ca	113	70.0	130
EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	----	----	----	----
EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	----	----	----	----
EA029-E: Magnesium Values (QCLot: 6164255)								
EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	<0.020	0.086 % Mg	102	70.0	130
EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	<0.020	0.089 % Mg	122	70.0	130
EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	----	----	----	----
EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	----	----	----	----
EA029-G: Retained Acidity (QCLot: 6164255)								
EA029: Net Acid Soluble Sulfur (20Je)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	<0.020	----	----	----	----

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
EA029-G: Retained Acidity (QCLot: 6164255) - continued								
EA029: HCl Extractable Sulfur (20Be)	----	0.02	% S	<0.020	0.76 % S	105	70.0	130
EA029-H: Acid Base Accounting (QCLot: 6164255)								
EA029: ANC Fineness Factor	----	0.5	-	<0.5	----	----	----	----
EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate	----	1	kg CaCO3/t	<1	----	----	----	----
EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	----	----	----	----
EA033-A: Actual Acidity (QCLot: 6164252)								
EA033: pH KCl (23A)	----	----	pH Unit	----	4.7 pH Unit	101	80.0	120
EA033: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	23.5 mole H+ / t	98.8	80.0	120
EA033: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033-B: Potential Acidity (QCLot: 6164252)								
EA033: Chromium Reducible Sulfur (22B)	----	0.005	% S	<0.005	0.283 % S	90.2	77.0	121
EA033: acidity - Chromium Reducible Sulfur (a-22B)	----	10	mole H+ / t	<10	----	----	----	----
EA033-D: Retained Acidity (QCLot: 6164252)								
EA033: Net Acid Soluble Sulfur (20Je)	----	0.02	% S	<0.02	----	----	----	----
EA033: acidity - Net Acid Soluble Sulfur (a-20J)	----	10	mole H+ / t	<10	----	----	----	----
EA033: sulfidic - Net Acid Soluble Sulfur (s-20J)	----	0.02	% pyrite S	<0.02	----	----	----	----
EA033: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.02	0.04 % S	100	70.0	128
EA033: HCl Extractable Sulfur (20Be)	----	0.02	% S	<0.02	0.76 % S	105	70.0	120

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2435028**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 28-Oct-2024
Site	: ----	Issue Date	: 05-Nov-2024
Sampler	: MK / FT	No. of samples received	: 5
Order number	: ----	No. of samples analysed	: 5

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, where applicable to the methodology, 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
EA029-A: pH Measurements							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-B: Acidity Trail							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-C: Sulfur Trail							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-D: Calcium Values							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-E: Magnesium Values							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-F: Excess Acid Neutralising Capacity							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-G: Retained Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA029-H: Acid Base Accounting							
Snap Lock Bag - frozen on receipt at ALS (EA029)							
BH03_4.5	**10-Oct-2024**	**05-Nov-2024**	06-Jul-2027	✓	**05-Nov-2024**	03-Feb-2025	✓
EA033-A: Actual Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033)							
BH01_5, BH03_4.5, BH03_5.5, BH202_6	**10-Oct-2024**	**05-Nov-2024**	10-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
Snap Lock Bag - frozen on receipt at ALS (EA033)							
BH12_5.5	**11-Oct-2024**	**05-Nov-2024**	11-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓

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
EA033-B: Potential Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033) BH01_5, BH03_4.5, BH03_5.5, BH202_6	**10-Oct-2024**	**05-Nov-2024**	10-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
Snap Lock Bag - frozen on receipt at ALS (EA033) BH12_5.5	**11-Oct-2024**	**05-Nov-2024**	11-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
EA033-C: Acid Neutralising Capacity							
Snap Lock Bag - frozen on receipt at ALS (EA033) BH01_5, BH03_4.5, BH03_5.5, BH202_6	**10-Oct-2024**	**05-Nov-2024**	10-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
Snap Lock Bag - frozen on receipt at ALS (EA033) BH12_5.5	**11-Oct-2024**	**05-Nov-2024**	11-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
EA033-D: Retained Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA033) BH01_5, BH03_4.5, BH03_5.5, BH202_6	**10-Oct-2024**	**05-Nov-2024**	10-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
Snap Lock Bag - frozen on receipt at ALS (EA033) BH12_5.5	**11-Oct-2024**	**05-Nov-2024**	11-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
EA033-E: Acid Base Accounting							
Snap Lock Bag - frozen on receipt at ALS (EA033) BH01_5, BH03_4.5, BH03_5.5, BH202_6	**10-Oct-2024**	**05-Nov-2024**	10-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓
Snap Lock Bag - frozen on receipt at ALS (EA033) BH12_5.5	**11-Oct-2024**	**05-Nov-2024**	11-Oct-2025	✓	**05-Nov-2024**	03-Feb-2025	✓

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)							
Chromium Suite for Acid Sulphate Soils	EA033	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Chromium Suite for Acid Sulphate Soils	EA033	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Chromium Suite for Acid Sulphate Soils	EA033	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	In house: Referenced to Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
Chromium Suite for Acid Sulphate Soils	EA033	SOIL	In house: Referenced to Ahern et al 2004. This method covers the determination of Chromium Reducible Sulfur (SCR); pHKCl; titratable actual acidity (TAA); acid neutralising capacity by back titration (ANC); and net acid soluble sulfur (SNAS) which incorporates peroxide sulfur. It applies to soils and sediments (including sands) derived from coastal regions. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house

Forward Lab / Split WO:

Analysis: Newcastle - EA150HC

Organised By / Date: #1-5

Relinquished By / Date:

Courier / Courier:

WO No: ES2435701

Checked By PO / Internal Sheet:

TAT

Environmental Division
Sydney
Work Order Reference
ES2435701

Telephone : - 61-2-8784 8555

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Keenan	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	205001663
Alternative Contact:	Finn Talmsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No.:	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	3-Day TAT
Email Address (results and invoice):	[redacted]	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	EG005T: Total Metals by ICP-AES; Fe	EA001: pH (CaCl)	ED093 Def: Exchangeable Cations with pre-treatment - Default Parameters	EA150H-C: Clay Content by Hydrometer									
BH01_0.5	0.5		10.10.24			x	x	x	x									ES2433214 #1
BH02_2	2		10.10.24			x	x	x	x									ES2433214 #20
SH10_0.1	0.1		11.10.24			x	x	x	x									ES2433290 #24
TP09_1.4-1.5	1.4-1.5		10.10.24			x	x	x	x									ES2433215 #60
TP12_1.0-1.1	1.0-1.1		9.10.24			x	x	x	x									ES2433215 #76
					Total:	5	5	5	5	0	0	0	0	0	0	0	0	

1 2 3 4 5

Relinquished by: Finn Talmsh	Received by:	Relinquished by:	Received by:
(name / company) Stantec Australia Pty Ltd	(name / company)	(name / company)	(name / company)
Date & Time: 1/11/2024 & 10:00am	Date & Time:	Date & Time:	Date & Time: 9/4/24
Signature: MK	Signature: FT	Signature:	Signature:

ES2435701

Fadi Soro

From: Sepan Mahamad
Sent: Friday, 1 November 2024 4:43 PM
To: Samples Sydney; Khaleda Ataei; rebatches.sydney; Jack Clifton
Subject: RE: Rebatch request: 305001663 - COC for EIL
Attachments: 305001663_JordanSpringsHS(EIL)_COC_V1.pdf

Categories: Rebatch

Hi Team,

Could we please proceed with this rebatch? EN have confirmed the PFAS container will he sufficient for EA150H-C where a bag is not available. I've reattached the CoC from the client.

Client has advised that the ID for TP14_1.0-1.1 is actually TP12_1.0 - 1.1

BH01_0.5	ES2433214-001	no bag, use PFAS container instead
BH02_2	ES2433214-020	
BH10_0.1	ES2433290-029	no bag, use PFAS container instead
TP09_1.4-1.5	ES2433215-060	
TP12_1.0-1.1	ES2433215-076	

Kind regards,

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **ES2435701**		
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
Address	: Level 9 - The Forum, 203 Pacific Highway St Leonards 2065	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: michael.koerner@cardno.com.au	E-mail	: khaleda.ataei@alsglobal.com
Telephone	: ----	Telephone	: + 61 2 8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Page	: 1 of 3
Order number	: ----	Quote number	: ES2024MWHAUS0006 (ES24MWHAUS0006)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: Jordan Springs, NSW		
Sampler	: MK / FT		

Dates

Date Samples Received	: 11-Oct-2024 14:33	Issue Date	: 04-Nov-2024
Client Requested Due Date	: 07-Nov-2024	Scheduled Reporting Date	: **07-Nov-2024**

Delivery Details

Mode of Delivery	: Undefined	Security Seal	: Not Available
No. of coolers/boxes	: ----	Temperature	: 21.8'C, 22.3'C
Receipt Detail	: Rebatch of ES2433214; ES2433290; ES2433215	No. of samples received / analysed	: 5 / 5

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- Rebatch of ES2433214; ES2433290; ES2433215
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Clay Content analysis will be conducted by ALS Newcastle.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

Method / Sample ID	Sample Container Received	Preferred Sample Container for Analysis
Particle Size Analysis by Hydrometer : EA150H		
BH01_0.5	- HDPE Soil Jar	- Snap Lock Bag
BH10_0.1	- HDPE Soil Jar	- Snap Lock Bag
Soil Particle Density : EA152		
BH01_0.5	- HDPE Soil Jar	- Dried soil
BH10_0.1	- HDPE Soil Jar	- Dried soil

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA001 pH (CaCl)	SOIL - EA055-103 Moisture Content	SOIL - EA150H-C Clay Content by Hydrometer	SOIL - ED008 Def Exchangeable Cations with pre-treatment -	SOIL - EG005T (solids) Total Metals by ICP-AES
ES2435701-001	10-Oct-2024 00:00	BH01_0.5	✓	✓	✓	✓	✓
ES2435701-002	10-Oct-2024 00:00	BH02_2	✓	✓	✓	✓	✓
ES2435701-003	11-Oct-2024 00:00	BH10_0.1	✓	✓	✓	✓	✓
ES2435701-004	10-Oct-2024 00:00	TP09_1.4-1.5	✓	✓	✓	✓	✓
ES2435701-005	09-Oct-2024 00:00	TP12_1.0-1.1	✓	✓	✓	✓	✓

Proactive Holding Time Report

The following table summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory.

Matrix: **SOIL** Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Client Sample ID(s)	Container	Due for extraction	Due for analysis	Samples Received		Instructions Received	
				Date	Evaluation	Date	Evaluation
EA001: pH in soil using a 0.01M CaCl2 extract							
BH01_0.5	Soil Glass Jar - Unpreserved	17-Oct-2024	17-Oct-2024	11-Oct-2024	✓	04-Nov-2024	×
BH02_2	Soil Glass Jar - Unpreserved	17-Oct-2024	17-Oct-2024	11-Oct-2024	✓	04-Nov-2024	×
BH10_0.1	Soil Glass Jar - Unpreserved	18-Oct-2024	18-Oct-2024	11-Oct-2024	✓	04-Nov-2024	×
TP09_1.4-1.5	Soil Glass Jar - Unpreserved	17-Oct-2024	17-Oct-2024	11-Oct-2024	✓	04-Nov-2024	×
TP12_1.0-1.1	Soil Glass Jar - Unpreserved	16-Oct-2024	16-Oct-2024	11-Oct-2024	✓	04-Nov-2024	×

Requested Deliverables

ACCOUNTS ADDRESS		
- A4 - AU Tax Invoice (INV)	Email	sapinvoices@stantec.com
Brock Collinson		
- *AU Certificate of Analysis - NATA (COA)	Email	brock.collinson@cardno.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	brock.collinson@cardno.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	brock.collinson@cardno.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	brock.collinson@cardno.com.au
- Attachment - Report (SUBCO)	Email	brock.collinson@cardno.com.au
- Chain of Custody (CoC) (COC)	Email	brock.collinson@cardno.com.au
- EDI Format - ESDAT (ESDAT)	Email	brock.collinson@cardno.com.au
- EDI Format - XTab (XTAB)	Email	brock.collinson@cardno.com.au
FINN TANISH		
- *AU Certificate of Analysis - NATA (COA)	Email	finn.tanish@stantec.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	finn.tanish@stantec.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	finn.tanish@stantec.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	finn.tanish@stantec.com
- Attachment - Report (SUBCO)	Email	finn.tanish@stantec.com
- Chain of Custody (CoC) (COC)	Email	finn.tanish@stantec.com
- EDI Format - ESDAT (ESDAT)	Email	finn.tanish@stantec.com
- EDI Format - XTab (XTAB)	Email	finn.tanish@stantec.com
MICHAEL KOERNER		
- *AU Certificate of Analysis - NATA (COA)	Email	michael.koerner@cardno.com.au
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	michael.koerner@cardno.com.au
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	michael.koerner@cardno.com.au
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	michael.koerner@cardno.com.au
- Attachment - Report (SUBCO)	Email	michael.koerner@cardno.com.au
- Chain of Custody (CoC) (COC)	Email	michael.koerner@cardno.com.au
- EDI Format - ESDAT (ESDAT)	Email	michael.koerner@cardno.com.au
- EDI Format - XTab (XTAB)	Email	michael.koerner@cardno.com.au

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

CERTIFICATE OF ANALYSIS

Work Order	: **ES2435701**	Page	: 1 of 3
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024 14:33
Order number	: ----	Date Analysis Commenced	: 04-Nov-2024
C-O-C number	: ----	Issue Date	: 07-Nov-2024 16:23
Sampler	: MK / FT		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- ALS is not NATA accredited for the analysis of Exchangeable Cations on Alkaline Soils when performed under ALS Method ED006.
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	BH01_0.5	BH02_2	BH10_0.1	TP09_1.4-1.5	TP12_1.0-1.1
			Sampling date / time	10-Oct-2024 00:00	10-Oct-2024 00:00	11-Oct-2024 00:00	10-Oct-2024 00:00	09-Oct-2024 00:00
Compound	CAS Number	LOR	Unit	ES2435701-001	ES2435701-002	ES2435701-003	ES2435701-004	ES2435701-005
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	6.9	4.7	7.9	7.8	7.3
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	11.4	16.7	11.4	9.6	9.6
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	28	36	34	19	18
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	2.56	2.53	2.61	2.65	2.60
ED006: Exchangeable Cations on Alkaline Soils								
ø Exchangeable Calcium	----	0.2	meq/100g	3.2	----	3.3	1.5	1.6
ø Exchangeable Magnesium	----	0.2	meq/100g	3.0	----	3.7	8.8	2.8
ø Exchangeable Potassium	----	0.2	meq/100g	<0.2	----	<0.2	<0.2	<0.2
ø Exchangeable Sodium	----	0.2	meq/100g	0.5	----	1.8	2.0	0.7
ø Cation Exchange Capacity	----	0.2	meq/100g	6.8	----	8.8	12.3	5.1
ø Exchangeable Sodium Percent	----	0.2	%	7.7	----	20.4	16.6	14.5
ED008: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	3.6	----	----	----
Exchangeable Magnesium	----	0.1	meq/100g	----	4.5	----	----	----
Exchangeable Potassium	----	0.1	meq/100g	----	0.2	----	----	----
Exchangeable Sodium	----	0.1	meq/100g	----	0.9	----	----	----
Cation Exchange Capacity	----	0.1	meq/100g	----	9.2	----	----	----
Exchangeable Sodium Percent	----	0.1	%	----	9.4	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Iron	7439-89-6	50	mg/kg	43000	25600	43100	35400	9750

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

QUALITY CONTROL REPORT

Work Order	: **ES2435701**	Page	: 1 of 4
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Contact	: Khaleda Ataei
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	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Order number	: ----	Date Analysis Commenced	: 04-Nov-2024
C-O-C number	: ----	Issue Date	: 07-Nov-2024
Sampler	: MK / FT		
Site	: Jordan Springs, NSW		
Quote number	: ES24MWHAUS0006		
No. of samples received	: 5		
No. of samples analysed	: 5		

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*
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

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: 6164576)									
ES2435548-001	Anonymous	EG005T: Iron	7439-89-6	50	mg/kg	29100	34800	17.7	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6164578)									
ES2435701-002	BH02_2	EG005T: Iron	7439-89-6	50	mg/kg	25600	23800	7.0	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 6164491)									
ES2435396-011	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.5	7.5	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6164580)									
ES2435548-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	10.3	9.5	8.2	0% - 50%
ES2435680-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	12.0	12.4	3.5	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6164581)									
ES2435701-002	BH02_2	EA055: Moisture Content	----	0.1	%	16.7	17.2	2.6	0% - 20%
ED006: Exchangeable Cations on Alkaline Soils (QC Lot: 6169116)									
ES2435396-011	Anonymous	ED006: Exchangeable Sodium Percent	----	0.2	%	37.2	37.3	0.4	0% - 20%
		ED006: Exchangeable Calcium	----	0.2	meq/100g	9.1	8.7	3.9	0% - 20%
		ED006: Exchangeable Magnesium	----	0.2	meq/100g	0.4	<0.2	78.1	No Limit
		ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	<0.2	0.0	No Limit
		ED006: Exchangeable Sodium	----	0.2	meq/100g	5.6	5.2	8.1	0% - 20%
		ED006: Cation Exchange Capacity	----	0.2	meq/100g	15.2	13.9	8.5	0% - 20%
ED008: Exchangeable Cations (QC Lot: 6169128)									
ES2435701-002	BH02_2	ED008: Exchangeable Sodium Percent	----	0.1	%	9.4	9.5	0.0	0% - 20%
		ED008: Exchangeable Calcium	----	0.1	meq/100g	3.6	3.6	0.0	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 (%)*
ED008: Exchangeable Cations (QC Lot: 6169128) - continued									
ES2435701-002	BH02_2	ED008: Exchangeable Magnesium	----	0.1	meq/100g	4.5	4.5	0.0	0% - 20%
		ED008: Exchangeable Potassium	----	0.1	meq/100g	0.2	0.2	0.0	0% - 20%
		ED008: Exchangeable Sodium	----	0.1	meq/100g	0.9	0.9	0.0	0% - 20%
		ED008: Cation Exchange Capacity	----	0.1	meq/100g	9.2	9.2	0.0	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: 6164576)								
EG005T: Iron	7439-89-6	50	mg/kg	<50	31660 mg/kg	95.4	89.0	112
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6164578)								
EG005T: Iron	7439-89-6	50	mg/kg	<50	31660 mg/kg	105	89.0	112
ED006: Exchangeable Cations on Alkaline Soils (QCLot: 6169116)								
ED006: Exchangeable Calcium	----	0.2	meq/100g	<0.2	2.5 meq/100g	100	80.0	110
ED006: Exchangeable Magnesium	----	0.2	meq/100g	<0.2	4.17 meq/100g	98.7	80.0	110
ED006: Exchangeable Potassium	----	0.2	meq/100g	<0.2	1.28 meq/100g	101	80.0	110
ED006: Exchangeable Sodium	----	0.2	meq/100g	<0.2	2.17 meq/100g	108	80.0	110
ED006: Cation Exchange Capacity	----	0.2	meq/100g	<0.2	----	----	----	----
ED006: Exchangeable Sodium Percent	----	0.2	%	<0.2	----	----	----	----
ED008: Exchangeable Cations (QCLot: 6169128)								
ED008: Exchangeable Calcium	----	0.1	meq/100g	<0.1	1 meq/100g	106	82.0	128
ED008: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	106	82.0	120
ED008: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	108	70.0	140
ED008: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	110	78.0	136
ED008: Exchangeable Sodium Percent	----	0.1	%	<0.1	----	----	----	----
ED008: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----

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.

- **No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.**

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2435701**	Page	: 1 of 5
Client	: **STANTEC AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MICHAEL KOERNER	Telephone	: + 61 2 8784 8555
Project	: 305001663 SINSW - Jordan Springs HS (DSI)	Date Samples Received	: 11-Oct-2024
Site	: Jordan Springs, NSW	Issue Date	: 07-Nov-2024
Sampler	: MK / FT	No. of samples received	: 5
Order number	: ----	No. of samples analysed	: 5

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, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

Outliers : Frequency of Quality Control Samples

- **Quality Control Sample Frequency Outliers exist - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA001: pH in soil using 0.01M CaCl extract						
Soil Glass Jar - Unpreserved						
TP12_1.0-1.1	06-Nov-2024	16-Oct-2024	**21**	----	----	----
Soil Glass Jar - Unpreserved						
BH01_0.5, BH02_2, TP09_1.4-1.5	06-Nov-2024	17-Oct-2024	**20**	----	----	----
Soil Glass Jar - Unpreserved						
BH10_0.1	06-Nov-2024	18-Oct-2024	**19**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Matrix Spikes (MS)						
Total Metals by ICP-AES	EG005T	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for ***VOC in soils*** vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **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
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001)							
TP12_1.0-1.1	**09-Oct-2024**	**06-Nov-2024**	16-Oct-2024	×	**06-Nov-2024**	06-Nov-2024	✓
Soil Glass Jar - Unpreserved (EA001)							
BH01_0.5, BH02_2, TP09_1.4-1.5	**10-Oct-2024**	**06-Nov-2024**	17-Oct-2024	×	**06-Nov-2024**	06-Nov-2024	✓
Soil Glass Jar - Unpreserved (EA001)							
BH10_0.1	**11-Oct-2024**	**06-Nov-2024**	18-Oct-2024	×	**06-Nov-2024**	06-Nov-2024	✓

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)							
Lab Split: Managed Moisture for Dry Weight Det. (EA055) TP12_1.0-1.1	09-Oct-2024	----	----	----	04-Nov-2024	07-Apr-2025	✓
Lab Split: Managed Moisture for Dry Weight Det. (EA055) BH01_0.5, BH02_2, TP09_1.4-1.5	10-Oct-2024	----	----	----	04-Nov-2024	08-Apr-2025	✓
Lab Split: Managed Moisture for Dry Weight Det. (EA055) BH10_0.1	11-Oct-2024	----	----	----	04-Nov-2024	09-Apr-2025	✓
EA150: Soil Classification based on Particle Size							
HDPE Soil Jar (EA150H) BH01_0.5	10-Oct-2024	----	----	----	07-Nov-2024	08-Apr-2025	✓
HDPE Soil Jar (EA150H) BH10_0.1	11-Oct-2024	----	----	----	07-Nov-2024	09-Apr-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) TP12_1.0-1.1	09-Oct-2024	----	----	----	07-Nov-2024	07-Apr-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA150H) BH02_2, TP09_1.4-1.5	10-Oct-2024	----	----	----	07-Nov-2024	08-Apr-2025	✓
EA152: Soil Particle Density							
HDPE Soil Jar (EA152) BH01_0.5	10-Oct-2024	----	----	----	07-Nov-2024	08-Apr-2025	✓
HDPE Soil Jar (EA152) BH10_0.1	11-Oct-2024	----	----	----	07-Nov-2024	09-Apr-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) TP12_1.0-1.1	09-Oct-2024	----	----	----	07-Nov-2024	07-Apr-2025	✓
Snap Lock Bag - Friable Asbestos/PSD Bag (EA152) BH02_2, TP09_1.4-1.5	10-Oct-2024	----	----	----	07-Nov-2024	08-Apr-2025	✓
ED006: Exchangeable Cations on Alkaline Soils							
Soil Glass Jar - Unpreserved (ED006) TP12_1.0-1.1	09-Oct-2024	06-Nov-2024	06-Nov-2024	✓	06-Nov-2024	06-Nov-2024	✓
Soil Glass Jar - Unpreserved (ED006) BH01_0.5, TP09_1.4-1.5	10-Oct-2024	06-Nov-2024	07-Nov-2024	✓	06-Nov-2024	07-Nov-2024	✓
Soil Glass Jar - Unpreserved (ED006) BH10_0.1	11-Oct-2024	06-Nov-2024	08-Nov-2024	✓	06-Nov-2024	08-Nov-2024	✓
ED008: Exchangeable Cations							
Soil Glass Jar - Unpreserved (ED008) BH02_2	10-Oct-2024	06-Nov-2024	07-Nov-2024	✓	06-Nov-2024	07-Nov-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) TP12_1.0-1.1	09-Oct-2024	05-Nov-2024	07-Apr-2025	✓	05-Nov-2024	07-Apr-2025	✓
Soil Glass Jar - Unpreserved (EG005T) BH01_0.5, BH02_2, TP09_1.4-1.5	10-Oct-2024	05-Nov-2024	08-Apr-2025	✓	05-Nov-2024	08-Apr-2025	✓
Soil Glass Jar - Unpreserved (EG005T) BH10_0.1	11-Oct-2024	05-Nov-2024	09-Apr-2025	✓	05-Nov-2024	09-Apr-2025	✓

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)							
Exchangeable Cations on Alkaline Soils	ED006	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations with pre-treatment	ED008	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	3	27	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	8	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Exchangeable Cations on Alkaline Soils	ED006	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations with pre-treatment	ED008	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	8	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Exchangeable Cations on Alkaline Soils	ED006	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations with pre-treatment	ED008	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	8	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Metals by ICP-AES	EG005T	0	8	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH in soil using a 0.01M CaCl2 extract	EA001	SOIL	In house: Referenced to Rayment and Lyons 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
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).
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1: Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Exchangeable Cations on Alkaline Soils	* ED006	SOIL	In house: Referenced to Soil Survey Test Method C5. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with alcoholic ammonium chloride at pH 8.5. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil.
Exchangeable Cations with pre-treatment	ED008	SOIL	In house: Referenced to Rayment & Lyons Method 15A2. Soluble salts are removed from the sample prior to analysis. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. 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
pH in soil using a 0.01M CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Exchangeable Cations Preparation Method (Alkaline Soils)	* ED006PR	SOIL	In house: Referenced to Rayment and Lyons method 15C1.
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Lyons method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
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

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

DEPOT/ENVIROLAB

Subcon / Forward Lab / Split WO: Asbestos / ALS Newcastle

Lab / Analysis:

Organised By / Date: ASS Prep ALS Brisbane

Relinquished By / Date:

Connote / Courier:

WO No: ES2433214

Attached By PO / Internal Sheet:

Please freeze ASS samples

Comments

	Sample information						Analysis Required										
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold				
1	BH01	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X							
2	BH01	1	GJ, PJ, ACM Bag	10.10.24	Chill								X				
3	BH01	1.5	GJ, PJ, ACM Bag	10.10.24	Chill								X				
4	BH01	1.8	GJ, PJ, ACM Bag	10.10.24	Chill		X			X							
5	BH01	2.5	GJ	10.10.24	Chill								X				
6	BH01	3	GJ, PJ, ACM Bag	10.10.24	Chill								X				
7	BH01	3.3	GJ, PJ, ACM Bag	10.10.24	Chill								X				
8	BH01	3.8	GJ	10.10.24	Chill		X					X					
9	BH01	4.3	GJ, PJ, ACM Bag	10.10.24	Chill							X					
10	BH01	5	GJ, PJ, ASS Bag	10.10.24	Chill							X					
11	BH01	5.5	ASS Bag	10.10.24	Chill							X					
12	BH01	6	GJ, PJ, ASS Bag	10.10.24	Chill							X					
13	BH01	6.5	GJ, ASS Bag	10.10.24	Chill							X					
14	BH01	7	GJ, ASS Bag	10.10.24	Chill							X					
15	QA101		GJ, PJ	10.10.24	Chill		X	X	X								
16	QC101		GJ, PJ	10.10.24	Chill								X				
17	BH02	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X				
18	BH02	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X				
19	BH02	1	GJ, PJ, ACM Bag	10.10.24	Chill								X				
20	BH02	2	GJ, PJ, ACM Bag	10.10.24	Chill		X										
21	BH02	3	GJ, PJ, ACM Bag	10.10.24	Chill								X				
22	BH02	3.8	GJ, PJ	10.10.24	Chill								X				

Environmental Division
Sydney
Work Order Reference
ES2433214

Telephone : + 61-2-8784 8555

ENVIROLAB GROUP

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

Job No: 365839

Date Received: 14/10/24

Time Received: 1250

Received By: ST

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Please forward to Envirolab

Rec: 11/10/24 1355

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

	Sample information					Analysis Required												Comments
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
23	BH02	4	GJ, PJ	10.10.24	Chill		X			X										
24	BH02	4.3	GJ, PJ	10.10.24	Chill								X							
25	BH02	4.7	GJ, PJ, ASS Bag	10.10.24	Chill		X													
26	BH02	5	ASS Bag	10.10.24	Chill								X							
27	BH02	5.5	ASS Bag	10.10.24	Chill								X							
28	BH02	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
29	BH03	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
30	BH03	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
31	BH03	1	GJ, PJ	10.10.24	Chill								X							
32	BH03	1.5	GJ, PJ	10.10.24	Chill								X							
33	BH03	2.2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
34	BH03	3	GJ, PJ, ASS Bag	10.10.24	Chill								X							
35	BH03	4	GJ, PJ, ASS Bag	10.10.24	Chill		X	X	X	X										
36	BH03	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
37	BH03	5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
38	BH03	5.5	ASS Bag	10.10.24	Chill							X								
39	BH03	6	GJ, PJ, ASS Bag	10.10.24	Chill						X	X								
40	BH03	6.5	ASS Bag	10.10.24	Chill		X		X			X								
41	BH03	7	ASS Bag	10.10.24	Chill							X								
42	BH03	7.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
43	BH202	1	GJ	10.10.24	Chill		X	X												
44	BH202	2	GJ	10.10.24	Chill								X							

#363539
ST
14/10/24

Rec:
11/10/24

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SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 976 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs. NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH202	3	GJ	10.10.24	Chill								X							
BH202	5	ASS Bag	10.10.24	Chill							X								
BH202	6	ASS Bag	10.10.24	Chill							X								
BH202	8.5	ASS Bag	10.10.24	Chill							X								
BH04	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X										
BH04	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH04	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH04	2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH04	3	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH04	4	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH04	5	GJ, PJ, ASS Bag	10.10.24	Chill		X		X		X	X								
BH04	5.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH04	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH05	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X										
BH05	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH05	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH05	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH05	3.8	GJ, PJ	10.10.24	Chill								X							
BH05	4.3	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X								
BH05	4.5	ASS Bag	10.10.24	Chill							X								
BH05	5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH05	5.5	ASS Bag	10.10.24	Chill							X								

#363839
ST
14/10/24

Rec
11/10/24
1355

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum. 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos-Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH05	6	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH06	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
BH06	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH06	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	4	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	5.5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
QA102		GJ, PJ	10.10.24	Chill		X	X	X											
QC102		GJ, PJ	10.10.24	Chill								X							
BH07	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH07	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	1.5	GJ, PJ, ACM Bag	10.10.24	Chill		X		X	X										
BH07	2.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	4	GJ, PJ	10.10.24	Chill								X							

#363839
ST
14/10/24

Rec.
11/10/24
1355

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						Please freeze ASS samples
BH07	5	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X							
BH07	5.5	ASS Bag	10.10.24	Chill							X							
BH07	6	GJ, ASS Bag	10.10.24	Chill							X							
BH09	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X									
BH09	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X						
BH09	1	GJ, PJ, ACM Bag	10.10.24	Chill								X						
BH09	2	GJ, PJ, ACM Bag	10.10.24	Chill								X						
BH09	3	GJ, PJ, ACM Bag	10.10.24	Chill								X						
BH09	3.8	GJ, PJ	10.10.24	Chill		X				X								
BH09	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X	X						
BH09	5	GJ, ASS Bag	10.10.24	Chill							X	X						
BH09	5.5	GJ, ASS Bag	10.10.24	Chill							X	X						
BH09	6	ASS Bag	10.10.24	Chill							X	X						
					Total	25	10	9	14	5	31	51	0	0	0			

Relinquished by:	Michael Koerner	Received by:	Relinquished by:	Received by:	Wells / ALS
(name / company)	Stantec	(name / company)	(name / company)	(name / company)	
Date & Time:	11/10/2024 11:36	Date & Time:	Date & Time:	Date & Time:	11/10/24 1355
Signature:	MK	Signature:	Signature:	Signature:	

#368339
CT
14/10/24

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Cardno (NSW/ACT) Pty Ltd
Attention	Michael Koerner

Sample Login Details

Your reference	305001663, SINSW - Jordan Springs HS (DSI)
Envirolab Reference	363839
Date Sample Received	14/10/2024
Date Instructions Received	18/10/2024
Date Results Expected to be Reported	25/10/2024

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	PFAS in Soils Extended
QC101	✓	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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 363839

Client Details

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

Sample Details

Your Reference	**305001663, SINSW - Jordan Springs HS (DSI)**
Number of Samples	1 Soil
Date samples received	14/10/2024
Date completed instructions received	18/10/2024

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	25/10/2024
Date of Issue	25/10/2024

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
Amanda Chui, LC/Air Toxics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	21/10/2024
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	90

svTRH (C10-C40) in Soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	19/10/2024
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	90

PAHs in Soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	18/10/2024
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	83

Organochlorine Pesticides in soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	18/10/2024
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	71

Organophosphorus Pesticides in Soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	18/10/2024
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	71

PCBs in Soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	18/10/2024
Date analysed	-	18/10/2024
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	76

Acid Extractable metals in soil		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date prepared	-	18/10/2024
Date analysed	-	18/10/2024
Arsenic	mg/kg	8
Cadmium	mg/kg	<0.4
Chromium	mg/kg	36
Copper	mg/kg	33
Lead	mg/kg	21
Mercury	mg/kg	<0.1
Nickel	mg/kg	20
Zinc	mg/kg	81

Moisture		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date prepared	-	18/10/2024
Date analysed	-	21/10/2024
Moisture	%	9.6

PFAS in Soils Extended		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Date prepared	-	19/10/2024
Date analysed	-	19/10/2024
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	95
Surrogate $^{13}C_2$ *PFOA*	%	123
Extracted ISTD $^{13}C_3$ *PFBS*	%	104
Extracted ISTD $^{18}O_2$ *PFHxS*	%	120
Extracted ISTD $^{13}C_4$ *PFOS*	%	113
Extracted ISTD $^{13}C_4$ *PFBA*	%	118

PFAS in Soils Extended		
Our Reference		363839-1
Your Reference	UNITS	QC101
Date Sampled		10/10/2024
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	112
Extracted ISTD $^{13}C_2$ *PFHxA*	%	115
Extracted ISTD $^{13}C_4$ *PFHpA*	%	123
Extracted ISTD $^{13}C_4$ *PFOA*	%	99
Extracted ISTD $^{13}C_5$ *PFNA*	%	111
Extracted ISTD $^{13}C_2$ *PFDA*	%	122
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	128
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	112
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	150
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	110
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	127
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	147
Extracted ISTD $^{13}C_8$ *FOSA*	%	125
Extracted ISTD d_3 *N MeFOSA*	%	129
Extracted ISTD d_5 *N EtFOSA*	%	115
Extracted ISTD d_7 *N MeFOSE*	%	137
Extracted ISTD d_9 *N EtFOSE*	%	115
Extracted ISTD d_3 *N MeFOSAA*	%	102
Extracted ISTD d_5 *N EtFOSAA*	%	119
Total Positive PFHxS & PFOS	µg/kg	0.1
Total Positive PFOS & PFOA	µg/kg	0.1
Total Positive PFAS	µg/kg	0.1

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.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			21/10/2024	[NT]	[NT]	[NT]	[NT]	21/10/2024	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	91	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	94	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	96	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Naphthalene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	91	[NT]	[NT]	[NT]	[NT]	97	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			19/10/2024	[NT]	[NT]	[NT]	[NT]	19/10/2024	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	112	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	103	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	112	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
Surrogate o-Terphenyl	%		Org-020	91	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	66	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	68	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	64	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	[NT]	[NT]	[NT]	[NT]	62	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	83	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	68	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	66	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	78	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	64	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	82	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	70	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Fenthion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	72	[NT]
Phosalone	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	82	[NT]	[NT]	[NT]	[NT]	85	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	81	[NT]
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	78	[NT]	[NT]	[NT]	[NT]	78	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date prepared	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Date analysed	-			18/10/2024	[NT]	[NT]	[NT]	[NT]	18/10/2024	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	113	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	106	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	107	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date prepared	-			19/10/2024	[NT]	[NT]	[NT]	[NT]	19/10/2024	[NT]
Date analysed	-			19/10/2024	[NT]	[NT]	[NT]	[NT]	19/10/2024	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	85	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	101	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	101	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	119	[NT]	[NT]	[NT]	[NT]	116	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	123	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	143	[NT]	[NT]	[NT]	[NT]	137	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	130	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	130	[NT]	[NT]	[NT]	[NT]	138	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	128	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	128	[NT]	[NT]	[NT]	[NT]	126	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	121	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	122	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	128	[NT]	[NT]	[NT]	[NT]	125	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	119	[NT]	[NT]	[NT]	[NT]	107	[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.

CoC : 18/10/24, 1040

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	Project Number:	305001663
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koerner@stantec.com; finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						
QC101		GJ, PJ	10.10.24	Chill		X	X	X										
QC102		GJ, PJ	10.10.24	Chill		X	X	X										Sample sent from ALS 18/10/2024. Expected to be received by Envirolab 18/10/2024 or 19/10/2024
					Total	2	2	2	0	0	0	0	0	0	0	0		

Relinquished by: (name / company)	Michael Koerner Stantec	Received by: (name / company)	ELS SYD / SP, KWU	Relinquished by: (name / company)	Received by: (name / company)
Date & Time:	18/10/2024 10:12	Date & Time:	21/10/24, 1050	Date & Time:	Date & Time:
Signature:	MK	Signature:		Signature:	Signature:

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

Job No: 364369

Date Received: 21/10/24
Time Received: 1050
Received By: KWU/SP
Temp: ~~Cool~~/Ambient
Cooling: ~~Ice~~/Icepack
Security: Intact/~~Broken~~/None

QC102 #48

T, B, P

S1073-1074

S1079-1083

S1106

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0473 978 773	Project Number:	305001663
Alternative Contact:	Fiori Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and Invoice):	michael.koerner@stantec.com fiori.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

QC101/ENVIROLAB

Subcon / Forward Lab / Split WO:

Lab / Analysis: Asbestos/ALS/New Cas

Organised By / Date: ASS Field Screen/ALS/Bas

Relinquished By / Date:

Consignment

Connote / Courier:

WO No: 6324 33214

Attached By PO / Internal Sheet:

Please freeze ASS samples

	Sample Information						Analysis Required									
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold			
1	BH01	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X						
2	BH01	1	GJ, PJ, ACM Bag	10.10.24	Chill								X			
3	BH01	1.5	GJ, PJ, ACM Bag	10.10.24	Chill								X			
4	BH01	1.8	GJ, PJ, ACM Bag	10.10.24	Chill		X			X						
5	BH01	2.5	GJ	10.10.24	Chill								X			
6	BH01	3	GJ, PJ, ACM Bag	10.10.24	Chill								X			
7	BH01	3.3	GJ, PJ, ACM Bag	10.10.24	Chill								X			
8	BH01	3.8	GJ	10.10.24	Chill		X					X				
9	BH01	4.3	GJ, PJ, ACM Bag	10.10.24	Chill							X				
10	BH01	5	GJ, PJ, ASS Bag	10.10.24	Chill							X				
11	BH01	5.5	ASS Bag	10.10.24	Chill							X				
12	BH01	6	GJ, PJ, ASS Bag	10.10.24	Chill							X				
13	BH01	6.5	GJ, ASS Bag	10.10.24	Chill							X				
14	BH01	7	GJ, ASS Bag	10.10.24	Chill							X				
15	QA101		GJ, PJ	10.10.24	Chill		X	X	X							
16	QC101		GJ, PJ	10.10.24	Chill								X			
17	BH02	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X			
18	BH02	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X			
19	BH02	1	GJ, PJ, ACM Bag	10.10.24	Chill								X			
20	BH02	2	GJ, PJ, ACM Bag	10.10.24	Chill		X									
21	BH02	3	GJ, PJ, ACM Bag	10.10.24	Chill								X			
22	BH02	3.8	GJ, PJ	10.10.24	Chill								X			

Environmental Division
Sydney
Work Order Reference
ES2433214

Telephone : – 61-2-8784 8555

ENVIROLAB GROUP

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

Job No: 364369

Date Received: 21/10/24

Time Received: 1030 Please forward to Envirolab

Received By: KW

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Rec

1155

1355

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koemar	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0478 078 773	Project Number:	305001663
Alternative Contact:	Finn Talnsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 569	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koemar@stantec.com; finn.talnsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required													Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH02	4	GJ, PJ	10.10.24	Chill		X			X										
BH02	4.3	GJ, PJ	10.10.24	Chill								X							
BH02	4.7	GJ, PJ, ASS Bag	10.10.24	Chill		X													
BH02	5	ASS Bag	10.10.24	Chill								X							
BH02	5.5	ASS Bag	10.10.24	Chill								X							
BH02	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH03	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
BH03	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH03	1	GJ, PJ	10.10.24	Chill								X							
BH03	1.5	GJ, PJ	10.10.24	Chill								X							
BH03	2.2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH03	3	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH03	4	GJ, PJ, ASS Bag	10.10.24	Chill		X	X	X	X										
BH03	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH03	5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH03	5.5	ASS Bag	10.10.24	Chill							X								
BH03	6	GJ, PJ, ASS Bag	10.10.24	Chill						X	X								
BH03	6.5	ASS Bag	10.10.24	Chill		X		X			X								
BH03	7	ASS Bag	10.10.24	Chill							X								
BH03	7.5	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH202	1	GJ	10.10.24	Chill		X	X												
BH202	2	GJ	10.10.24	Chill								X							

364369
21/10/24
KWn

Rec'd
11/10/24
13:55

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Keernes	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 078 773	Project Number:	305001663
Alternative Contact:	Finn Tolnish	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0066
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.keernes@stantec.com; finn.tolnish@stantec.com	Report format:	ESDAT: Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required														Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEX/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold								Please freeze ASS samples
BH202	3	GJ	10.10.24	Chill								X								
BH202	5	ASS Bag	10.10.24	Chill							X									
BH202	6	ASS Bag	10.10.24	Chill							X									
BH202	8.5	ASS Bag	10.10.24	Chill							X									
BH04	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X											
BH04	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH04	1	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH04	2	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH04	3	GJ, PJ, ACM Bag	10.10.24	Chill		X			X											
BH04	4	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH04	5	GJ, PJ, ASS Bag	10.10.24	Chill		X		X		X	X									
BH04	5.5	GJ, PJ, ASS Bag	10.10.24	Chill							X									
BH04	6	GJ, PJ, ASS Bag	10.10.24	Chill								X								
BH05	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X	X	X	X											
BH05	1	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH05	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X											
BH05	3	GJ, PJ, ACM Bag	10.10.24	Chill								X								
BH05	3.8	GJ, PJ	10.10.24	Chill								X								
BH05	4.3	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X									
BH05	4.5	ASS Bag	10.10.24	Chill							X									
BH05	5	GJ, PJ, ASS Bag	10.10.24	Chill							X									
BH05	5.5	ASS Bag	10.10.24	Chill							X									

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Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Kosmer	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0478 978 773	Project Number:	305501663
Alternative Contact:	Finn Tarrish	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWH AUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.kosmer@stantec.com; finn.tarrish@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

Sample Information						Analysis Required													Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TPH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13. OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
BH05	6	GJ, PJ, ASS Bag	10.10.24	Chill							X								
BH06	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
BH06	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	2	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH06	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	4	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH06	5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	5.5	GJ, PJ, ASS Bag	10.10.24	Chill								X							
BH06	6	GJ, PJ, ASS Bag	10.10.24	Chill								X							
QA102		GJ, PJ	10.10.24	Chill		X	X	X											
QC102		GJ, PJ	10.10.24	Chill								X							
BH07	0.1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	0.5	GJ, PJ, ACM Bag	10.10.24	Chill		X			X										
BH07	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	1.5	GJ, PJ, ACM Bag	10.10.24	Chill		X		X	X										
BH07	2.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
BH07	4	GJ, PJ	10.10.24	Chill								X							

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SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Stantec

Contact Person:	Michael Koemer	Project Name:	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0475 878 773	Project Number:	305001863
Alternative Contact:	Finn Tainsh	Site Location:	Jordan Springs, NSW
Telephone Number:	0432 034 559	Project Specific Quote No. :	ES24MWHAUS0006
Sampler:	MK / FT	Date results required:	Standard
Email Address (results and invoice):	michael.koemer@stantec.com finn.tainsh@stantec.com	Report format:	ESDAT; Excel; PDF
Address: Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065			

	Sample Information					Analysis Required													Comments
	Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEX/NPAH (As, Cd, Cr, Cu, Hg, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold							Please freeze ASS samples
86	BH07	5	GJ, PJ, ASS Bag	10.10.24	Chill		X				X	X								
87	BH07	5.5	ASS Bag	10.10.24	Chill							X								
88	BH07	6	GJ, ASS Bag	10.10.24	Chill							X								
89	BH09	0.1	GJ, PJ, ACM Bag	10.10.24	Chill		X	X		X										
90	BH09	0.5	GJ, PJ, ACM Bag	10.10.24	Chill								X							
91	BH09	1	GJ, PJ, ACM Bag	10.10.24	Chill								X							
92	BH09	2	GJ, PJ, ACM Bag	10.10.24	Chill								X							
93	BH09	3	GJ, PJ, ACM Bag	10.10.24	Chill								X							
94	BH09	3.8	GJ, PJ	10.10.24	Chill		X				X									
95	BH09	4.5	GJ, PJ, ASS Bag	10.10.24	Chill							X	X							
96	BH09	5	GJ, ASS Bag	10.10.24	Chill							X	X							
97	BH09	5.5	GJ, ASS Bag	10.10.24	Chill							X	X							
98	BH09	6	ASS Bag	10.10.24	Chill							X	X							
						Total	5	1	0	1	5	11	11	0	0	0				

Relinquished by: (name / company)	Michael Koemer Stantec	Received by: (name / company)	Relinquished by: (name / company)	Received by: (name / company)	WEBS / ALS
Date & Time:	11/10/2024 11:06	Date & Time:	Date & Time:	Date & Time:	11/10/24 1355
Signature:	MK	Signature:	Signature:	Signature:	

364369
21/10/24
KWH

Fadi Soro

From: Lucas RosasNavratil on behalf of Samples Sydney
Sent: Friday, 18 October 2024 6:00 PM
To: Koerner, Michael; Samples Sydney
Subject: RE: [EXTERNAL] - RE: 305001663 - ES2433214, ES2433290 & ES2433215

Good afternoon Michael,

These samples will be sent to Envirolab on Monday.

Hope you have a lovely evening.

Kind regards,

right solutions right partner.

Lucas Rosas-Navratil
Sample Receipt Supervisor (Afternoon Shift), Environmental
Sydney, NSW

O: +61 2 8784 8555

Lucas.rosasnavratil@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com

364369
21/10/24
KWh



From: Koerner, Michael <michael.koerner@stantec.com>
Sent: Friday, October 18, 2024 10:34 AM
To: Samples Sydney <Samples.Sydney@alsglobal.com>
Subject: [EXTERNAL] - RE: 305001663 - ES2433214, ES2433290 & ES2433215

You don't often get email from michael.koerner@stantec.com. Learn why this is important

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi ALS,

Please disregard samples:

- QC101
- QC103
- QC104

These samples have already been received by Envirolab.

Kind regards,

Michael Koerner
Senior Environmental Scientist

Direct: +61 2 8448 1801
Mobile: + 61 476 978 773
michael.koerner@stantec.com

Stantec
Level 9, The Forum, 203 Pacific Highway
Sydney NSW 2065
AUSTRALIA

36436 9
21/10/24
1 CWn





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Please consider the environment before printing this email.

From: Koerner, Michael
Sent: Friday, October 18, 2024 10:31 AM
To: Samples Sydney <Samples.Sydney@alsglobal.com>
Subject: 305001663 - ES2433214, ES2433290 & ES2433215

Hi ALS Samples,

Could the following samples logged under report IDS (ES2433214, ES2433290 & ES2433215) please be forwarded to Envirolab:

1. QC101 (ES2433214)
2. QC102 (ES2433214)
3. QC103 (ES2433290)
4. QC104 (ES2433290)
5. QC100 (ES2433215)
6. QC200 (ES2433215)
7. QC300 (ES2433215)
8. QC400 (ES2433215)

VC

If you require any further information, please do not hesitate to reach out.

Kind regards,

Michael Koerner
Senior Environmental Scientist

Direct: +61 2 8448 1801
Mobile: + 61 476 978 773
michael.koerner@stantec.com

Stantec
Level 9, The Forum, 203 Pacific Highway
Sydney NSW 2065
AUSTRALIA





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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 364369

Client Details

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

Sample Details

Your Reference	**305001663, SINSW - Jordan Springs HS (DSI)**
Number of Samples	1 Soil
Date samples received	21/10/2024
Date completed instructions received	18/10/2024

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

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

Report Details

Date results requested by	28/10/2024
Date of Issue	28/10/2024

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
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Sean McAlary, Senior Chemist
Timothy Toll, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	28/10/2024
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	78

svTRH (C10-C40) in Soil		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	27/10/2024
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	78

PAHs in Soil		
Our Reference	UNITS	364369-1
Your Reference		QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	25/10/2024
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	85

Organochlorine Pesticides in soil		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	25/10/2024
alpha-BHC	mg/kg	<0.1
HCB	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Mirex	mg/kg	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	74

Organophosphorus Pesticides in Soil		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	25/10/2024
Dichlorvos	mg/kg	<0.1
Mevinphos	mg/kg	<0.1
Phorate	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Disulfoton	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Parathion-Methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyriphos	mg/kg	<0.1
Fenthion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Methidathion	mg/kg	<0.1
Fenamiphos	mg/kg	<0.1
Ethion	mg/kg	<0.1
Phosalone	mg/kg	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1
Coumaphos	mg/kg	<0.1
Surrogate 4-Chloro-3-NBTF	%	74

PCBs in Soil		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date extracted	-	25/10/2024
Date analysed	-	25/10/2024
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate 2-Fluorobiphenyl	%	80

Acid Extractable metals in soil			
Our Reference	UNITS	364369-1	364369-2
Your Reference		QC102	QC102 - [TRIPLICATE]
Date Sampled		10/10/2024	10/10/2024
Type of sample		Soil	Soil
Date prepared	-	25/10/2024	25/10/2024
Date analysed	-	25/10/2024	25/10/2024
Arsenic	mg/kg	7	7
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	12	12
Copper	mg/kg	24	26
Lead	mg/kg	20	19
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	14	15
Zinc	mg/kg	58	62

PFAS in Soils Extended		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date prepared	-	25/10/2024
Date analysed	-	25/10/2024
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	96
Surrogate $^{13}C_2$ *PFOA*	%	100
Extracted ISTD $^{13}C_3$ *PFBS*	%	99
Extracted ISTD $^{18}O_2$ *PFHxS*	%	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	94
Extracted ISTD $^{13}C_4$ *PFBA*	%	100

PFAS in Soils Extended		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	99
Extracted ISTD $^{13}C_2$ *PFHxA*	%	95
Extracted ISTD $^{13}C_4$ *PFHpA*	%	100
Extracted ISTD $^{13}C_4$ *PFOA*	%	97
Extracted ISTD $^{13}C_5$ *PFNA*	%	93
Extracted ISTD $^{13}C_2$ *PFDA*	%	102
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	110
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	99
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	141
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	96
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	95
Extracted ISTD $^{13}C_8$ *FOSA*	%	108
Extracted ISTD d_3 *N MeFOSA*	%	101
Extracted ISTD d_5 *N EtFOSA*	%	99
Extracted ISTD d_7 *N MeFOSE*	%	102
Extracted ISTD d_9 *N EtFOSE*	%	95
Extracted ISTD d_3 *N MeFOSAA*	%	79
Extracted ISTD d_5 *N EtFOSAA*	%	95
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

Moisture		
Our Reference		364369-1
Your Reference	UNITS	QC102
Date Sampled		10/10/2024
Type of sample		Soil
Date prepared	-	25/10/2024
Date analysed	-	28/10/2024
Moisture	%	8.4

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.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			28/10/2024	1	28/10/2024	28/10/2024		28/10/2024	28/10/2024
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	122	81
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	122	81
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	121	84
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	119	80
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	122	81
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	122	80
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	118	79
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	85	1	78	86	10	114	70

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			27/10/2024	1	27/10/2024	27/10/2024		27/10/2024	27/10/2024
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	87	72
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	93	73
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	72
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	87	72
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	93	73
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	72
Surrogate o-Terphenyl	%		Org-020	64	1	78	70	11	86	66

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	90
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	64	91
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	68	90
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	91
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	72	103
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	108
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	109
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	64	83
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	81	1	85	78	9	86	101

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	69	89
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	66	87
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	65	70
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	92
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	96
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	69	88
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	92
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	64	74
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	72	95
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	67	67
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	70	1	74	67	10	81	84

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	79
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	78
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	80
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	86
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	79	88
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	64	79
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	82
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	70	1	74	67	10	81	84

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	364369-1
Date extracted	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	74	91
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	74	1	80	71	12	80	97

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	364369-1
Date prepared	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	25/10/2024
Arsenic	mg/kg	4	Metals-020	<4	1	7	8	13	110	101
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	102	91
Chromium	mg/kg	1	Metals-020	<1	1	12	21	55	103	99
Copper	mg/kg	1	Metals-020	<1	1	24	27	12	102	102
Lead	mg/kg	1	Metals-020	<1	1	20	22	10	106	97
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	109	112
Nickel	mg/kg	1	Metals-020	<1	1	14	16	13	104	95
Zinc	mg/kg	1	Metals-020	<1	1	58	69	17	107	99

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			25/10/2024	[NT]	[NT]	[NT]	[NT]	25/10/2024	[NT]
Date analysed	-			25/10/2024	[NT]	[NT]	[NT]	[NT]	25/10/2024	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	112	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	114	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	102	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	69	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	111	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	123	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	118	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	123	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	124	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	117	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	106	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	80	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	95	[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.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 364369-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 364369-2.

364382

LOC: 18/10/24 1152

Stantec

SOIL CHAIN OF CUSTODY AND ANALYSIS REQUEST

Contact Person:	Michael Koerner	**Project Name:**	SINSW - Jordan Springs HS (DSI)
Telephone Number:	0476 978 773	**Project Number:**	305001663
Alternative Contact:		**Site Location:**	Jordan Springs, NSW
Telephone Number:		**Project Specific Quote No. :**	
Sampler:	BC	**Date results required:**	Standard
Email Address (results and invoice):	michael.koerner@stantec.com	**Report format:**	ESDAT; Excel; PDF
Address:	Level 9 The Forum, 203 Pacific Hwy, St Leonards NSW 2065		

Sample Information						Analysis Required												Comments
Sample ID (Location)	Sample ID (Depth)	Sample Type DS BS ES-Jar ES-Bag	Date Sampled	Sample Condition Normal, Chill, Frozen	Location	S-26: 8 metals/TRH/BTEXN/PAH (As, Cd, Cr, Cu, Hg, Ni, Zn)	S-13: OC/OP/PCB	EP231X: PFAS - Full Suite (30 analytes)	EA200: Asbestos Identification in Soils - Presence/Absence in 500 mL bags	EP074: Volatile Organic Compounds	pH Field/Fox	Hold						
QC100	1	ES-Jar, PFAS	9/10/2024	Chill		x		x										Please forward to Envirolab
QC200	2	ES-Jar, PFAS	9/10/2024	Chill		x												Please forward to Envirolab
QC300	3	ES-Jar, PFAS	9/10/2024	Chill		x												Please forward to Envirolab
QC400	4	ES-Jar, PFAS	10/10/2024	Chill		x												Please forward to Envirolab
					Total	4	0	1	0	0	0	0	#REF!	#REF!	#REF!			

Relinquished by: (name / company)	Michael Koerner Stantec Australia Pty Ltd	**Received by:** (name / company)		**Relinquished by:** (name / company)		**Received by:** (name / company)	
Date & Time:	18/10/2024 10:23	**Date & Time:**		**Date & Time:**		**Date & Time:**	
Signature:	MK	**Signature:**		**Signature:**		**Signature:**	

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Cardno (NSW/ACT) Pty Ltd
Attention	Michael Koerner

Sample Login Details

Your reference	305001663, SINSW - Jordan Springs HS (DSI)
Envirolab Reference	364382
Date Sample Received	21/10/2024
Date Instructions Received	21/10/2024
Date Results Expected to be Reported	On Hold

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	4 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metalsin soil	PFAS in Soils Extended	On Hold
QC100									✓
QC200									✓
QC300									✓
QC400									✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.
TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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CERTIFICATE OF ANALYSIS 364382

Client Details

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

Sample Details

Your Reference	**305001663, SINSW - Jordan Springs HS (DSI)**
Number of Samples	4 Soil
Date samples received	21/10/2024
Date completed instructions received	21/10/2024

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	28/10/2024
Date of Issue	28/10/2024

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Results Approved By
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Liam Timmins, Organics Supervisor
Sean McAlary, Senior Chemist

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		364382-1	364382-2	364382-3	364382-4
Your Reference	UNITS	QC100	QC200	QC300	QC400
Date Sampled		09/10/2024	09/10/2024	09/10/2024	10/10/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Date analysed	-	24/10/2024	24/10/2024	24/10/2024	24/10/2024
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	103	97	112	118

svTRH (C10-C40) in Soil					
Our Reference		364382-1	364382-2	364382-3	364382-4
Your Reference	UNITS	QC100	QC200	QC300	QC400
Date Sampled		09/10/2024	09/10/2024	09/10/2024	10/10/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Date analysed	-	25/10/2024	25/10/2024	25/10/2024	25/10/2024
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	91	90	89

PAHs in Soil					
Our Reference		364382-1	364382-2	364382-3	364382-4
Your Reference	UNITS	QC100	QC200	QC300	QC400
Date Sampled		09/10/2024	09/10/2024	09/10/2024	10/10/2024
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Date analysed	-	25/10/2024	25/10/2024	25/10/2024	25/10/2024
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	84	84	85	82

Acid Extractable metals in soil					
Our Reference		364382-1	364382-2	364382-3	364382-4
Your Reference	UNITS	QC100	QC200	QC300	QC400
Date Sampled		09/10/2024	09/10/2024	09/10/2024	10/10/2024
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	25/10/2024	25/10/2024	25/10/2024	25/10/2024
Date analysed	-	25/10/2024	25/10/2024	25/10/2024	25/10/2024
Arsenic	mg/kg	7	9	7	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	17	15	9
Copper	mg/kg	26	14	16	32
Lead	mg/kg	14	16	19	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	7	10	21
Zinc	mg/kg	62	26	32	110

PFAS in Soils Extended		
Our Reference		364382-1
Your Reference	UNITS	QC100
Date Sampled		09/10/2024
Type of sample		Soil
Date prepared	-	25/10/2024
Date analysed	-	25/10/2024
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	<0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	<0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfon amide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate $^{13}C_8$ *PFOS*	%	102
Surrogate $^{13}C_2$ *PFOA*	%	103
Extracted ISTD $^{13}C_3$ *PFBS*	%	102
Extracted ISTD $^{18}O_2$ *PFHxS*	%	97
Extracted ISTD $^{13}C_4$ *PFOS*	%	90
Extracted ISTD $^{13}C_4$ *PFBA*	%	97

PFAS in Soils Extended		
Our Reference		364382-1
Your Reference	UNITS	QC100
Date Sampled		09/10/2024
Type of sample		Soil
Extracted ISTD $^{13}C_3$ *PFPeA*	%	103
Extracted ISTD $^{13}C_2$ *PFHxA*	%	98
Extracted ISTD $^{13}C_4$ *PFHpA*	%	99
Extracted ISTD $^{13}C_4$ *PFOA*	%	93
Extracted ISTD $^{13}C_5$ *PFNA*	%	92
Extracted ISTD $^{13}C_2$ *PFDA*	%	93
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	100
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	98
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	129
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	94
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	91
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	104
Extracted ISTD $^{13}C_8$ *FOSA*	%	109
Extracted ISTD d_3 *N MeFOSA*	%	99
Extracted ISTD d_5 *N EtFOSA*	%	97
Extracted ISTD d_7 *N MeFOSE*	%	98
Extracted ISTD d_9 *N EtFOSE*	%	90
Extracted ISTD d_3 *N MeFOSAA*	%	78
Extracted ISTD d_5 *N EtFOSAA*	%	90
Total Positive PFHxS & PFOS	µg/kg	<0.1
Total Positive PFOS & PFOA	µg/kg	<0.1
Total Positive PFAS	µg/kg	<0.1

Moisture					
Our Reference		364382-1	364382-2	364382-3	364382-4
Your Reference	UNITS	QC100	QC200	QC300	QC400
Date Sampled		09/10/2024	09/10/2024	09/10/2024	10/10/2024
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	24/10/2024	24/10/2024	24/10/2024	24/10/2024
Date analysed	-	25/10/2024	25/10/2024	25/10/2024	25/10/2024
Moisture	%	9.0	10	9.2	2.5

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.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-16	[NT]
Date extracted	-			24/10/2024	1	24/10/2024	24/10/2024		24/10/2024	[NT]
Date analysed	-			24/10/2024	1	24/10/2024	24/10/2024		24/10/2024	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	133	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	131	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	126	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	119	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	128	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	126	[NT]
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	124	[NT]
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	109	1	103	96	7	129	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-16	[NT]
Date extracted	-			24/10/2024	1	24/10/2024	24/10/2024		24/10/2024	[NT]
Date analysed	-			24/10/2024	1	25/10/2024	25/10/2024		24/10/2024	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	138	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	140	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	129	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	138	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	140	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	129	[NT]
Surrogate o-Terphenyl	%		Org-020	89	1	91	88	3	119	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-16	[NT]
Date extracted	-			24/10/2024	1	24/10/2024	24/10/2024		24/10/2024	[NT]
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	74	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	76	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	72	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	86	1	84	77	9	87	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-16	[NT]
Date prepared	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	[NT]
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	[NT]
Arsenic	mg/kg	4	Metals-020	<4	1	7	6	15	108	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	95	[NT]
Chromium	mg/kg	1	Metals-020	<1	1	8	7	13	99	[NT]
Copper	mg/kg	1	Metals-020	<1	1	26	23	12	99	[NT]
Lead	mg/kg	1	Metals-020	<1	1	14	14	0	98	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	95	[NT]
Nickel	mg/kg	1	Metals-020	<1	1	11	12	9	98	[NT]
Zinc	mg/kg	1	Metals-020	<1	1	62	51	19	101	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	[NT]
Date analysed	-			25/10/2024	1	25/10/2024	25/10/2024		25/10/2024	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	104	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	96	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	113	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	102	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	96	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	112	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	104	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	92	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	82	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	80	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	82	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	77	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	91	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	111	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	1	<0.5	<0.5	0	114	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	1	<5	<5	0	102	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	97	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	1	<0.1	<0.1	0	110	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	69	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	97	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	86	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	1	<1	<1	0	106	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/kg	1	Org-029	<1	1	<1	<1	0	108	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	1	<1	<1	0	109	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	1	<5	<5	0	111	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	123	[NT]
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	1	<0.2	<0.2	0	99	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	98	1	102	98	4	99	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	111	1	103	104	1	109	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	118	1	102	95	7	113	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	123	1	97	96	1	111	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	98	1	90	90	0	97	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	101	1	97	95	2	105	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	125	1	103	98	5	113	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	109	1	98	96	2	107	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	112	1	99	96	3	109	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	106	1	93	92	1	102	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	96	1	92	91	1	96	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	104	1	93	90	3	102	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	88	1	100	93	7	99	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	83	1	98	99	1	93	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	100	1	129	129	0	124	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	92	1	94	88	7	96	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	99	1	91	93	2	99	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	104	1	104	89	16	112	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	115	1	109	104	5	117	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	99	1	99	101	2	108	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	93	1	97	97	0	100	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	103	1	98	107	9	106	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	88	1	90	96	6	99	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	74	1	78	78	0	80	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	95	1	90	92	2	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.

Chain of Custody

Stantec

From: Stantec St Leonards
Address: Level 9
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Attention: **Michael Koerner**
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To: Eurofins Sydney
Address:
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Girraween NSW 2145
Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com

Date: 2/10/2024
TAT: Standard
Purchase Order: 305001633
Laboratory Quote ID: Stantec Rates
Project number: 305001633
Project name: Jordan Springs HS
Data output format: PDF, Esdat

Attempt to chill evident: Y / N

Sample Temperature on Arrival: 4.1

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	Hold	Asbestos in Soil (NEPM)	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	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	BH204_0.1	2/10/2024	Soil	GJ/PJ/B	1		1	1	1	1	1			1						1								
	BH204_1	2/10/2024	Soil	GJ/B															1									
	BH204_2.5	2/10/2024	Soil	GJ/B	1		1	1						1						1								
	BH204_4	2/10/2024	Soil	GJ/B															1									
	BH204_5	2/10/2024	Soil	GJ															1									
	BH204_6	2/10/2024	Soil	GJ															1									
	BH204_7	2/10/2024	Soil	GJ															1									
	BH204_8	2/10/2024	Soil	GJ															1									
	BH204_10	2/10/2024	Soil	GJ															1									
	PH204_0.2	2/10/2024	Soil	GJ/B	1		1	1						1						1								
	PH204_1.5	2/10/2024	Soil	GJ/B															1									
	PH204_3	2/10/2024	Soil	GJ/B															1									
	PH204_4	2/10/2024	Soil	GJ															1									
	PH204_5	2/10/2024	Soil	GJ															1									
	PH203_0.5	2/10/2024	Soil	GJ/B	1		1	1	1	1	1			1						1							B7 B15	
				Total	4		4	4	2	2	2			4					11	4								

Relinquished By: Michael Koerner
Company: Stantec
Time: 9:05 AM

Received By: Elizabeth Brotherton
Company: Eurofins
Time: 11/10 9:11am
Date:

Drop off

Relinquished By:
Company:
Time:
Date:

Received By:
Company:
Time:
Date:

1147899

Chain of Custody

Stantec

From: Stantec St Leonards
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Attention: **Michael Koerner**
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Phone: (02) 9900 8400
Email: EnviroSampleNSW@eurofins.com

Date: 2/10/2024
TAT: Standard
Purchase Order: 305001633
Laboratory Quote ID: Stantec Rates
Project number: 305001633
Project name: Jordan Springs HS
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	Hold	Asbestos in Soil (NEPM)	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	Select Analyte or Delete to Clear	Applicable Suites	Sample Comments
	PH203_3	2/10/2024	Soil	GJ/B															1								
	PH203_4	2/10/2024	Soil	GJ/B															1								
	PH203_5	2/10/2024	Soil	GJ															1								
				Total															3								

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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 & 2780	Site# 25079

Eurofins ARL Pty Ltd

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NATA# 2377
Site# 2370 & 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: Stantec Australia Pty Ltd (NSW/ACT)
Contact name: Michael Koerner
Project name: JORDAN SPRINGS HS
Project ID: 305001633
Turnaround time: 5 Day
Date/Time received Oct 11, 2024 9:11 AM
Eurofins reference 1147899

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.
X	Split sample sent to requested external lab.
X	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:

Ursula Long on phone : or by email: UrsulaLong@eurofins.com

Results will be delivered electronically via email to Michael Koerner - Michael.Koerner@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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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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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: JORDAN SPRINGS HS
Project ID: 305001633

Order No.: 605001633
Report #: 1147899
Phone: (02) 9493 9700
Fax:

Received: Oct 11, 2024 9:11 AM
Due: Oct 18, 2024
Priority: 5 Day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD*	Eurofins Suite B15	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	BH204_0.1	Oct 02, 2024		Soil	S24-Oc0026634	X		X	X	X
2	BH204_2.5	Oct 02, 2024		Soil	S24-Oc0026635	X			X	X
3	BH204_0.2	Oct 02, 2024		Soil	S24-Oc0026636	X			X	X
4	BH203_0.5	Oct 02, 2024		Soil	S24-Oc0026637	X		X	X	X
5	BH204_1	Oct 02, 2024		Soil	S24-Oc0026638		X			
6	BH204_4	Oct 02, 2024		Soil	S24-Oc0026639		X			
7	BH204_5	Oct 02, 2024		Soil	S24-Oc0026640		X			
8	BH204_6	Oct 02, 2024		Soil	S24-Oc0026641		X			
9	BH204_7	Oct 02, 2024		Soil	S24-Oc0026642		X			
10	BH204_8	Oct 02, 2024		Soil	S24-Oc0026643		X			
11	BH204_10	Oct 02, 2024		Soil	S24-Oc0026644		X			
12	BH204_1.4	Oct 02, 2024		Soil	S24-Oc0026645		X			
13	BH204_3	Oct 02, 2024		Soil	S24-Oc0026646		X			
14	BH204_4	Oct 02, 2024		Soil	S24-Oc0026647		X			

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Sample Detail						Asbestos - WA guidelines	HOLD*	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
15	BH204_5	Oct 02, 2024		Soil	S24-Oc0026648		X			
16	BH203_3	Oct 02, 2024		Soil	S24-Oc0026649		X			
17	BH203_4	Oct 02, 2024		Soil	S24-Oc0026650		X			
18	BH203_5	Oct 02, 2024		Soil	S24-Oc0026651		X			
Test Counts						4	14	2	4	4

Certificate of Analysis

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:	Michael Koerner
Report	1147899-AID
Project Name	JORDAN SPRINGS HS
Project ID	305001633
Received Date	Oct 11, 2024
Date Reported	Oct 18, 2024

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004 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.*
Man-made vitreous fibre (MMVF)	Fibres exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and bio-soluble fibres. NOTE: previously known as "synthetic mineral fibre" (SMF). Simple analytical procedures such as polarised light microscopy cannot detect or reliably identify asbestos in some types of commercial products containing asbestos, either because the fibres are below the resolution of optical microscopy or because the matrix material adheres too strongly to the fibres. For these types of products, electron microscopy may be necessary.
Subsampling Soil Samples	The sample submitted is dried and passed through a 10 mm sieve followed by a 2 mm sieve. All fibrous matter greater than 10 mm and greater than 2 mm and the material passing through the 2 mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 g to 60 g, then a subsampling routine based on ISO 3082:2017(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be subsampled for trace analysis, in accordance with AS 5370:2024*.*
Bonded asbestos-containing material (ACM)	The material is first examined, and any fibres are 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 5370:2024*. *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 (LOR)	The performance limitation of the AS 5370:2024* 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, per se. Examination of 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 5370:2024*, and hence, NATA Accreditation does not cover the performance of this service (non-NATA results are shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964-2004: "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 JORDAN SPRINGS HS
Project ID 305001633
Date Sampled Oct 02, 2024
Report 1147899-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH204_0.1	24-Oc0026634	Oct 02, 2024	Approximate Sample 252g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH204_2.5	24-Oc0026635	Oct 02, 2024	Approximate Sample 52g Sample consisted of: Brown coarse-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH204_0.2	24-Oc0026636	Oct 02, 2024	Approximate Sample 314g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
BH203_0.5	24-Oc0026637	Oct 02, 2024	Approximate Sample 424g Sample consisted of: Brown fine-grained clayey sandy 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	Oct 18, 2024	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Oct 18, 2024	Indefinite

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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 & 2780	Site# 25079

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Phone: (02) 9493 9700
Fax:

Received: Oct 11, 2024 9:11 AM
Due: Oct 18, 2024
Priority: 5 Day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Ursula Long

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	HOLD*	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	BH204_0.1	Oct 02, 2024		Soil	S24-Oc0026634		X		X	X	X
2	BH204_2.5	Oct 02, 2024		Soil	S24-Oc0026635	X				X	X
3	BH204_0.2	Oct 02, 2024		Soil	S24-Oc0026636		X			X	X
4	BH203_0.5	Oct 02, 2024		Soil	S24-Oc0026637		X		X	X	X
5	BH204_1	Oct 02, 2024		Soil	S24-Oc0026638			X			
6	BH204_4	Oct 02, 2024		Soil	S24-Oc0026639			X			
7	BH204_5	Oct 02, 2024		Soil	S24-Oc0026640			X			
8	BH204_6	Oct 02, 2024		Soil	S24-Oc0026641			X			
9	BH204_7	Oct 02, 2024		Soil	S24-Oc0026642			X			
10	BH204_8	Oct 02, 2024		Soil	S24-Oc0026643			X			
11	BH204_10	Oct 02, 2024		Soil	S24-Oc0026644			X			
12	BH204_1.4	Oct 02, 2024		Soil	S24-Oc0026645			X			
13	BH204_3	Oct 02, 2024		Soil	S24-Oc0026646			X			
14	BH204_4	Oct 02, 2024		Soil	S24-Oc0026647			X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD*	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
15	BH204_5	Oct 02, 2024		Soil	S24-Oc0026648			X			
16	BH203_3	Oct 02, 2024		Soil	S24-Oc0026649			X			
17	BH203_4	Oct 02, 2024		Soil	S24-Oc0026650			X			
18	BH203_5	Oct 02, 2024		Soil	S24-Oc0026651			X			
Test Counts						1	3	14	2	4	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).

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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 distinguish visibly 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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly 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 the degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021), ISBN: 9780616667079.
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012), .ISBN: 9780717665020
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)].
MMVF	Man-Made Vitreous Fibre - exhibiting isotropic characteristics, including glass fibres, glass wool, rock wool, slag wool, ceramic fibres and “bio-soluble fibres. NOTE: previously known as “synthetic mineral fibre” (SMF).
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 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
PCM	Phase Contrast Microscopy. This is used for fibre counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004..
Sampling	Unless otherwise stated, Eurofins are not responsible for sampling equipment or the sampling process.
SRA	Sample Receipt Advice.
Trace Analysis	An analytical procedure is 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 to AS 5370:2024* Sampling and qualitative identification of asbestos in bulk materials (ISO 22262-1:2012, MOD), formerly AS 4964-2004.. It may include (but is 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-Oc0026634, 24-Oc0026636, 24-Oc0026637: 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.

24-Oc0026635: The sample received was not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-sample to be analysed accurately represented the sample received.

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:

Sayeed Abu	Senior Analyst-Asbestos

Authorised by:

Laxman Dias	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.

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.

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: **Michael Koerner**

Report **1147899-S**
Project name JORDAN SPRINGS HS
Project ID 305001633
Received Date Oct 11, 2024

Client Sample ID			**BH204_0.1**	**BH204_2.5**	**BH204_0.2**	**BH203_0.5**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S24-Oc0026634**	**S24-Oc0026635**	**S24-Oc0026636**	**S24-Oc0026637**
Date Sampled			**Oct 02, 2024**	**Oct 02, 2024**	**Oct 02, 2024**	**Oct 02, 2024**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
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
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)*[N01]	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
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	%	92	129	103	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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

Client Sample ID			BH204_0.1	BH204_2.5	BH204_0.2	BH203_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Oc0026634	S24-Oc0026635	S24-Oc0026636	S24-Oc0026637
Date Sampled			Oct 02, 2024	Oct 02, 2024	Oct 02, 2024	Oct 02, 2024
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	62	69	71	70
p-Terphenyl-d14 (surr.)	1	%	63	67	72	71
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	%	68	-	-	76
Tetrachloro-m-xylene (surr.)	1	%	61	-	-	70
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

Client Sample ID			BH204_0.1	BH204_2.5	BH204_0.2	BH203_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S24-Oc0026634	S24-Oc0026635	S24-Oc0026636	S24-Oc0026637
Date Sampled			Oct 02, 2024	Oct 02, 2024	Oct 02, 2024	Oct 02, 2024
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	70	-	-	76
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	%	68	-	-	76
Tetrachloro-m-xylene (surr.)	1	%	61	-	-	70
Heavy Metals						
Arsenic	2	mg/kg	3.6	6.1	8.2	7.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.6	29	11	12
Copper	5	mg/kg	17	22	30	21
Lead	5	mg/kg	9.9	16	15	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.6	19	25	12
Zinc	5	mg/kg	37	59	94	51
Sample Properties						
% Moisture	1	%	11	9.9	12	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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Oct 11, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Oct 11, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Oct 11, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Oct 11, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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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 & 2780	Site# 25079

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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: JORDAN SPRINGS HS
Project ID: 305001633

Order No.: 605001633
Report #: 1147899
Phone: (02) 9493 9700
Fax:

Received: Oct 11, 2024 9:11 AM
Due: Oct 18, 2024
Priority: 5 Day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD*	Eurofins Suite B15	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	BH204_0.1	Oct 02, 2024		Soil	S24-Oc0026634	X		X	X	X
2	BH204_2.5	Oct 02, 2024		Soil	S24-Oc0026635	X			X	X
3	BH204_0.2	Oct 02, 2024		Soil	S24-Oc0026636	X			X	X
4	BH203_0.5	Oct 02, 2024		Soil	S24-Oc0026637	X		X	X	X
5	BH204_1	Oct 02, 2024		Soil	S24-Oc0026638		X			
6	BH204_4	Oct 02, 2024		Soil	S24-Oc0026639		X			
7	BH204_5	Oct 02, 2024		Soil	S24-Oc0026640		X			
8	BH204_6	Oct 02, 2024		Soil	S24-Oc0026641		X			
9	BH204_7	Oct 02, 2024		Soil	S24-Oc0026642		X			
10	BH204_8	Oct 02, 2024		Soil	S24-Oc0026643		X			
11	BH204_10	Oct 02, 2024		Soil	S24-Oc0026644		X			
12	BH204_1.4	Oct 02, 2024		Soil	S24-Oc0026645		X			
13	BH204_3	Oct 02, 2024		Soil	S24-Oc0026646		X			
14	BH204_4	Oct 02, 2024		Soil	S24-Oc0026647		X			

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Eurofins Environment Testing Australia Pty Ltd
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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 & 2780	Site# 25079

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Address: Level 9, The Forum, 203 Pacific Highway
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NSW 2065

Project Name: JORDAN SPRINGS HS
Project ID: 305001633

Order No.: 605001633
Report #: 1147899
Phone: (02) 9493 9700
Fax:

Received: Oct 11, 2024 9:11 AM
Due: Oct 18, 2024
Priority: 5 Day
Contact Name: Michael Koerner

Eurofins Analytical Services Manager : Ursula Long

Sample Detail						Asbestos - WA guidelines	HOLD*	Eurofins Suite B15	Moisture Set	Eurofins Suite B7
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X
15	BH204_5	Oct 02, 2024		Soil	S24-Oc0026648		X			
16	BH203_3	Oct 02, 2024		Soil	S24-Oc0026649		X			
17	BH203_4	Oct 02, 2024		Soil	S24-Oc0026650		X			
18	BH203_5	Oct 02, 2024		Soil	S24-Oc0026651		X			
Test Counts						4	14	2	4	4

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							
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	%	110			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
TRH C6-C10	%	108			70-130	Pass	
TRH >C10-C16	%	70			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	107			70-130	Pass	
Toluene	%	100			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	128			70-130	Pass	
o-Xylene	%	112			70-130	Pass	
Xylenes - Total*	%	123			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	128			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	80			70-130	Pass	
Acenaphthylene	%	79			70-130	Pass	
Anthracene	%	84			70-130	Pass	
Benz(a)anthracene	%	80			70-130	Pass	
Benzo(a)pyrene	%	72			70-130	Pass	
Benzo(b&j)fluoranthene	%	82			70-130	Pass	
Benzo(g.h.i)perylene	%	76			70-130	Pass	
Benzo(k)fluoranthene	%	72			70-130	Pass	
Chrysene	%	72			70-130	Pass	
Dibenz(a.h)anthracene	%	80			70-130	Pass	
Fluoranthene	%	80			70-130	Pass	
Fluorene	%	77			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	78			70-130	Pass	
Naphthalene	%	77			70-130	Pass	
Phenanthrene	%	75			70-130	Pass	
Pyrene	%	80			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	83			70-130	Pass	
4.4'-DDD	%	92			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	80			70-130	Pass	
a-HCH	%	80			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	81			70-130	Pass	
b-HCH	%	75			70-130	Pass	
d-HCH	%	77			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	82			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	77			70-130	Pass	
Endrin	%	79			70-130	Pass	
Endrin aldehyde	%	83			70-130	Pass	
Endrin ketone	%	83			70-130	Pass	
g-HCH (Lindane)	%	80			70-130	Pass	
Heptachlor	%	83			70-130	Pass	
Heptachlor epoxide	%	84			70-130	Pass	
Hexachlorobenzene	%	83			70-130	Pass	
Methoxychlor	%	80			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	72			70-130	Pass	
Dimethoate	%	94			70-130	Pass	
Ethion	%	78			70-130	Pass	
Fenitrothion	%	94			70-130	Pass	
Methyl parathion	%	77			70-130	Pass	
Mevinphos	%	89			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	73			70-130	Pass	
Aroclor-1260	%	88			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	99			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	91			80-120	Pass	
Mercury	%	103			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	102			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	S24-Oc0026708	NCP	%	92			70-130	Pass	
TRH C10-C14	S24-Oc0025144	NCP	%	79			70-130	Pass	
TRH C6-C10	S24-Oc0026708	NCP	%	90			70-130	Pass	
TRH >C10-C16	S24-Oc0025144	NCP	%	77			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Oc0026708	NCP	%	92			70-130	Pass	
Toluene	S24-Oc0026708	NCP	%	92			70-130	Pass	
Ethylbenzene	S24-Oc0026708	NCP	%	89			70-130	Pass	
m&p-Xylenes	S24-Oc0026708	NCP	%	98			70-130	Pass	
o-Xylene	S24-Oc0026708	NCP	%	86			70-130	Pass	
Xylenes - Total*	S24-Oc0026708	NCP	%	94			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	S24-Oc0026708	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S24-Oc0031363	NCP	%	111			70-130	Pass	
Acenaphthylene	S24-Oc0031363	NCP	%	100			70-130	Pass	
Anthracene	S24-Oc0031363	NCP	%	111			70-130	Pass	
Benz(a)anthracene	S24-Oc0031363	NCP	%	98			70-130	Pass	
Benzo(a)pyrene	S24-Oc0031363	NCP	%	115			70-130	Pass	
Benzo(b&j)fluoranthene	S24-Oc0031363	NCP	%	110			70-130	Pass	
Benzo(g.h.i)perylene	S24-Oc0031363	NCP	%	107			70-130	Pass	
Benzo(k)fluoranthene	S24-Oc0031363	NCP	%	103			70-130	Pass	
Chrysene	S24-Oc0031363	NCP	%	112			70-130	Pass	
Dibenz(a.h)anthracene	S24-Oc0031363	NCP	%	102			70-130	Pass	
Fluoranthene	S24-Oc0031363	NCP	%	101			70-130	Pass	
Fluorene	S24-Oc0031363	NCP	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S24-Oc0031363	NCP	%	105			70-130	Pass	
Naphthalene	S24-Oc0031363	NCP	%	104			70-130	Pass	
Phenanthrene	S24-Oc0031363	NCP	%	94			70-130	Pass	
Pyrene	S24-Oc0031363	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S24-Oc0018903	NCP	%	96			70-130	Pass	
4.4'-DDD	S24-Oc0018903	NCP	%	118			70-130	Pass	
4.4'-DDE	S24-Oc0018903	NCP	%	100			70-130	Pass	
4.4'-DDT	S24-Oc0018903	NCP	%	86			70-130	Pass	
Aldrin	S24-Oc0018903	NCP	%	98			70-130	Pass	
b-HCH	S24-Oc0018903	NCP	%	91			70-130	Pass	
d-HCH	S24-Oc0018903	NCP	%	95			70-130	Pass	
Dieldrin	S24-Oc0018903	NCP	%	98			70-130	Pass	
Endosulfan I	S24-Oc0018903	NCP	%	99			70-130	Pass	
Endosulfan II	S24-Oc0018903	NCP	%	101			70-130	Pass	
Endosulfan sulphate	S24-Oc0018903	NCP	%	92			70-130	Pass	
Endrin	S24-Oc0018903	NCP	%	102			70-130	Pass	
Endrin aldehyde	S24-Oc0018903	NCP	%	98			70-130	Pass	
Endrin ketone	S24-Oc0018903	NCP	%	96			70-130	Pass	
Heptachlor	S24-Oc0018903	NCP	%	94			70-130	Pass	
Heptachlor epoxide	S24-Oc0018903	NCP	%	97			70-130	Pass	
Hexachlorobenzene	S24-Oc0018903	NCP	%	95			70-130	Pass	
Methoxychlor	S24-Oc0018903	NCP	%	89			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	S24-Oc0018903	NCP	%	85			70-130	Pass	
Aroclor-1260	S24-Oc0018903	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-Oc0025717	NCP	%	95			75-125	Pass	
Cadmium	S24-Oc0025717	NCP	%	94			75-125	Pass	
Chromium	S24-Oc0025717	NCP	%	93			75-125	Pass	
Copper	S24-Oc0025717	NCP	%	97			75-125	Pass	
Lead	S24-Oc0025717	NCP	%	89			75-125	Pass	
Mercury	S24-Oc0025717	NCP	%	95			75-125	Pass	
Nickel	S24-Oc0025717	NCP	%	93			75-125	Pass	
Zinc	S24-Oc0025717	NCP	%	111			75-125	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	S24-Oc0027953	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S24-Oc0026708	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-Oc0026708	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S24-Oc0026708	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	S24-Oc0027953	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S24-Oc0026708	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-Oc0026708	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S24-Oc0026708	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Oc0026685	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-Oc0026685	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-Oc0026685	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-Oc0026685	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-Oc0026685	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-Oc0026685	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Oc0026685	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S24-Oc0032020	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin aldehyde	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-Oc0032020	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-Oc0018892	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S24-Oc0032020	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S24-Oc0032020	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S24-Oc0032020	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S24-Oc0032020	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-Oc0032020	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-Oc0026703	NCP	mg/kg	2.3	< 2	17	30%	Pass	
Cadmium	S24-Oc0026702	NCP	mg/kg	1600	1700	6.0	30%	Pass	
Chromium	S24-Oc0026703	NCP	mg/kg	9.8	11	8.0	30%	Pass	
Copper	S24-Oc0026703	NCP	mg/kg	17	12	35	30%	Fail	Q15
Lead	S24-Oc0026703	NCP	mg/kg	19	31	47	30%	Fail	Q15
Mercury	S24-Oc0026703	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-Oc0026703	NCP	mg/kg	5.3	6.5	21	30%	Pass	
Zinc	S24-Oc0026703	NCP	mg/kg	34	38	12	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Oc0026557	NCP	%	13	13	<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
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
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Laxman Dias	Senior Analyst-Asbestos
Roopesh Rangarajan	Senior Analyst-Volatile
Fang Yee Tan	Senior Analyst-Metal



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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Appendix G Borehole Logs

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH101
FILE / JOB NO : 304100928
SHEET : 1 OF 2

PROJECT : New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW 2747

POSITION : E: 292060.95, N: 6265225.28 (56 MGA2020) SURFACE ELEVATION : 23.01 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess Drilling DRILLER : SK

DATE STARTED : 9/7/24 DATE COMPLETED : 9/7/24 DATE LOGGED : 9/7/24 LOGGED BY : AS CHECKED BY : TH

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T		E-F	10/07/24	1.00m SPT 4, 2, 2 Nc=4 1.45m	0.0 23.0			FILL: SILTY CLAY: pale grey, medium plasticity, trace fine grained sand, appeared moderately compacted			FILL
								0.30m FILL: SILTY SANDY CLAY: pale grey, brown, medium plasticity, trace siltstone, subangular gravel, appeared moderately compacted, trace concrete and brick fragments			1.00: SPT recovery 450mm
					1.0 22.0						
				2.50m SPT 6, 6, 5 Nc=11 2.95m	2.0 21.0			2.50m FILL: GRAVELLY CLAY: grey brown, medium plasticity, subangular gravel, trace siltstone, angular gravel, appeared moderately compacted, trace concrete and brick fragments	M		2.50: SPT recovery 450mm
					3.0 20.0						
				4.00m SPT 2, 2, 5 Nc=7 4.45m	4.0 19.0			4.00m FILL: SANDY CLAY: grey, orange, medium to high plasticity, fine grained sand, trace subangular to angular gravel, appeared moderately compacted			4.00: SPT recovery 450mm
					5.0 18.0						
				5.50m SPT 4, 5, 6 Nc=11 5.95m	6.0 17.0			5.50m SANDY CLAY: grey-orange, medium to high plasticity, fine grained sand			ALLUVIUM 5.50: SPT recovery 450mm
							CI-CH		W	St	
				7.00m ~~BT~~ 4, 5, 4 Nc=9 7.45m	7.0 16.0						7.00: SPT recovery 450mm
					8.0 15.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 304100928_JSPS.GPJ <<DrawingFile>> 02/Aug/2024 12:19 10.03.00.09

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH101
FILE / JOB NO : 304100928
SHEET : 2 OF 2

PROJECT : New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW 2747

POSITION : E: 292060.95, N: 6265225.28 (56 MGA2020) SURFACE ELEVATION : 23.01 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess Drilling DRILLER : SK

DATE STARTED : 9/7/24 DATE COMPLETED : 9/7/24 DATE LOGGED : 9/7/24 LOGGED BY : AS CHECKED BY : TH

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
					8.0 15.0			SANDY CLAY: grey-orange, medium to high plasticity, fine grained sand *(continued)*			ALLUVIUM
							CI-CH			St	
				8.50m SPT 6, 8, 11 Nc=19				8.50m GRAVELLY SANDY CLAY: yellow brown orange red, medium plasticity, fine to medium grained sand, subangular gravel			RESIDUAL SOIL 8.50: SPT recovery 450mm
AD/T		E-F		8.95m	9.0 14.0		CI		W	VSt	
				10.00m SPT 8, 15/100m Nc=R 10.25m	10.0 13.0		CI	10.00m 10.15m SILTY CLAY: grey brown, medium plasticity		H	10.00: SPT recovery 250mm
		H						10.25m SHALE: pale grey, inferred very low to low strength			WEATHERED ROCK
								BOREHOLE BH101 TERMINATED AT 10.25 m Refusal			
					11.0 12.0						
					12.0 11.0						
					13.0 10.0						
					14.0 9.0						
					15.0 8.0						
					16.0 7.0						

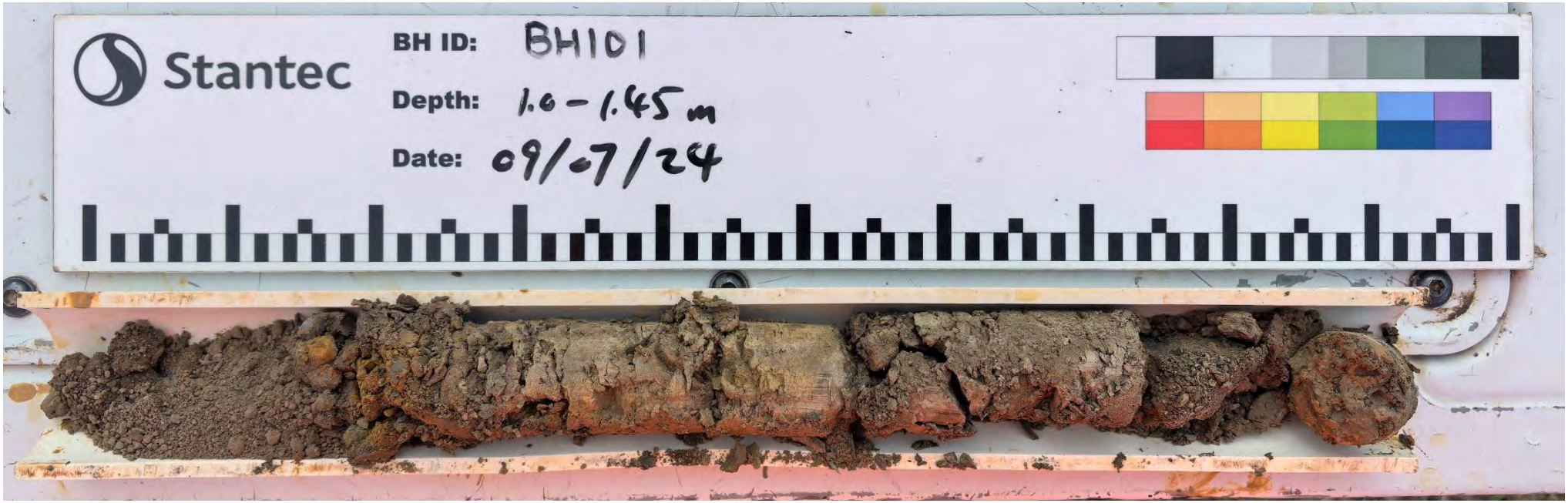
See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 304100928_JSPS.GPJ <<DrawingFile>> 02/Aug/2024 12:19 10.03.00.09

Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **2.5m to 2.95**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **4.0m to 4.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **5.5m to 5.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **7.0m to 7.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **8.5.0m to 8.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH101 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **09/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **10.0m to 10.25m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **AS**	CHECKED BY: **TH**



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH112
FILE / JOB NO : 304100928
SHEET : 1 OF 2

PROJECT : New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW 2747

POSITION : E: 292185.13, N: 6265409.41 (56 MGA2020) SURFACE ELEVATION : 21.29 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess Drilling DRILLER : SK

DATE STARTED : 8/7/24 DATE COMPLETED : 8/7/24 DATE LOGGED : 8/7/24 LOGGED BY : SL CHECKED BY : TH

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T		E-F	10/07/24	1.00m SPT 7, 12, 7 Nc=19 1.45m	0.0 21.3			FILL: SILTY CLAY: brown, high plasticity, trace fine grained sand, appeared poorly compacted, trace concrete and brick fragments			FILL
								0.30m FILL: CLAYEY SILT: grey, low to medium plasticity, with siltstone, subangular gravel, appeared poor to moderately compacted, trace concrete and brick fragments			1.00: SPT recovery 450mm
					1.0 20.3						
				2.50m SPT 3, 2, 0 Nc=2 2.95m	2.0 19.3						2.50: SPT recovery 450mm
					3.0 18.3				M		
				4.00m SPT 4, 5, 4 Nc=9 4.45m				3.80m SILTY CLAY: brown-yellow, high plasticity, with fine to medium grained sand, trace subangular gravel			ALLUVIUM 4.00: SPT recovery 450mm
					4.0 17.3						
					5.0 16.3						
				5.50m SPT 4, 4, 5 Nc=9 5.95m				5.50m SANDY CLAY: grey, brown-yellow, medium plasticity, fine to medium grained sand, trace subangular gravel			5.50: SPT recovery 450mm
				6.00m D 6.25m ES 6.50m	6.0 15.3					St	
			▶	7.00m SPT 7, 8, 7 Nc=15 7.45m	7.0 14.3				W	St to VSt	7.00: SPT recovery 450mm
					8.0 13.3						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 304100928_JSPS.GPJ <<DrawingFile>> 02/Aug/2024 12:20 10.03.00.09

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH112
FILE / JOB NO : 304100928
SHEET : 2 OF 2

PROJECT : New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW 2747

POSITION : E: 292185.13, N: 6265409.41 (56 MGA2020) SURFACE ELEVATION : 21.29 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess Drilling DRILLER : SK

DATE STARTED : 8/7/24 DATE COMPLETED : 8/7/24 DATE LOGGED : 8/7/24 LOGGED BY : SL CHECKED BY : TH

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T		E-F		8.50m SPT 7, 9, 6 Nc=15 8.95m	8.0 13.3 9.0 12.3			SANDY CLAY: grey, brown-yellow, high plasticity, fine to medium grained sand, trace subangular gravel *(continued)*	W	St to VSt	
								8.50m GRAVELLY CLAY: brown-yellow, brown, high plasticity, angular gravel		St to VSt	RESIDUAL SOIL 8.50: SPT recovery 450mm
		H		10.00m SPT 20/80mm Nc=R 10.08m	10.0 11.3			10.00m 10.08m SHALE: yellow-brown, recovered as clayey silt, low plasticity, inferred very low to low strength		H	WEATHERED ROCK 10.00: SPT recovery 80mm
								BOREHOLE BH112 TERMINATED AT 10.08 m Refusal			
					11.0 10.3						
					12.0 9.3						
					13.0 8.3						
					14.0 7.3						
					15.0 6.3						
					16.0 5.3						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 304100928_JSPS.GPJ <<DrawingFile>> 02/Aug/2024 12:20 10.03.00.09

Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **2.5m to 2.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **4.0m to 4.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **5.5m to 5.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **7.0m to 7.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **8.5m to 8.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



Stantec	TITLE: Borehole Core Photographs – BH112 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **304100928**	TEST DATE: **08/07/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **10.0m to 10.3m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **SL**	CHECKED BY: **TH**



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH202
FILE / JOB NO : 305001663
SHEET : 1 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292099.06, N: 6265270.46 (56 MGA20) SURFACE ELEVATION : 22.70 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 10/10/24 DATE COMPLETED : 10/10/24 DATE LOGGED : 10/10/24 LOGGED BY : HC CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
		E			0.0 22.7			0.10m TOPSOIL: CLAYEY SANDY SILT: brown, low plasticity, fine grained sand, low plasticity clay, with organic matters (grass, rootlets)	D		TOPSOIL
								FILL: GRAVELLY SILTY CLAY: brown, orange brown, grey mottled, low plasticity, fine to medium, angular to subangular shale gravel, trace fine grained sand, trace of cobble sized shale / sandstone fragments. Appeared to be compacted			FILL
				1.00m SPT 3, 6, 11 Nc=17	1.0 21.7						
				1.45m							
		E-F							M (<PL)		
					2.0 20.7						
				2.50m SPT 1, 2, 2 Nc=4							
				2.95m							
					3.0 19.7			3.00m FILL: SANDY GRAVEL: grey, pale grey,, fine to coarse gravel, sub-angular, fine to medium grained sand, with clay, trace of cobble sized shale / sandstone fragments. Appeared to be compacted			3.00: possible with cobble to boulder size sandstone, rcoovered as pale grey fine grained sand, mederated auger resistance
		F-H							M		
								3.50m FILL: SILTY CLAY: orange brown, mottled grey, medium to high plasticity, with fine to medium grained gravel, trace of cobble to boulder sized sandstone fragments. Appeared to be compacted			
				4.00m SPT 3, 6, 5 N=11	4.0 18.7				M (=PL)		
				4.45m				4.50m SILTY CLAY: brown, orange brown, mottled pale grey, medium to high plasticity, trace fine grained sand, trace fine grained sandstone gravel			ALLUVIUM
			water strike		5.0 17.7						
				5.50m SPT 4, 5, 6 N=11							
		E-F					CI-CH		M (=PL)	St	
				5.95m	6.0 16.7						
				7.00m SPT 7, 9, 14 N=23	7.0 15.7			7.00m SANDY SILTY CLAY: brown, orange brown, low to medium plasticity, fine grained sand			
				7.45m 7.50m DS			CL-CI		W	VSt	
				8.00m	8.0 14.7			8.00m			

AD/T

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:16 10.03.00.09

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH202
FILE / JOB NO : 305001663
SHEET : 2 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292099.06, N: 6265270.46 (56 MGA20) SURFACE ELEVATION : 22.70 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 10/10/24 DATE COMPLETED : 10/10/24 DATE LOGGED : 10/10/24 LOGGED BY : HC CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
					8.0 14.7			GRAVELLY SILTY CLAY: orange brown, red orange, medium to high plasticity, fine to medium, sub-angular to sub-rounded gravel, ironstone gravel			ALLUVIUM
				8.50m SPT 4, 12/100mm N=R 8.75m			CI-CH		W	VSt - H	
					9.0 13.7			9.00m SILTY CLAY: brown, grey,, medium to high plasticity, with ironstone, subangular to subrounded geotextile			POSSIBLE RESIDUAL SOIL
WB		E-F		10.00m SPT 8, 16, 10/50mm N=R 10.35m	10.0 12.7		CI-CH		M (=PL)	H	
					11.0 11.7			11.60m Continued as Cored Drill Hole			
					12.0 10.7						
					13.0 9.7						
					14.0 8.7						
					15.0 7.7						
					16.0 6.7						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:16 10.03.00.09

CORED DRILL HOLE LOG

HOLE NO : BH202
FILE / JOB NO : 305001663
SHEET : 3 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292099.06, N: 6265270.46 (56 MGA20) SURFACE ELEVATION : 22.70 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 10/10/24 DATE COMPLETED : 10/10/24 DATE LOGGED : 10/10/24 LOGGED BY : HC CHECKED BY :

CASING DIAMETER : BARREL (Length) : BIT : BIT CONDITION :

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(NO CORE PER RUN %) DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.3 M -1.0 H -3.0 VH -10.0 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					8.0 14.7						
					9.0 13.7						
					10.0 12.7						
					11.0 11.7						
							11.60m START CORING AT 11.60m				
NMLC		0% NO CORE	48		12.0 10.7		SILTSTONE: orange brown, red orange, pale grey, indistinguished flat bedded, iron stained	HW EW HW EW HW			11.70-12.00: EWS Clay 12.00-12.10: FZ 12.10-12.15: SM Clay 12.30: BP 0° Clay FILLED PR S 12.35: BP 0° Clay FILLED PR S 12.45: BP 0° CN PR S 12.55: BP 0° CN PR S 12.65: JT 20° Clay FILLED UN S 12.75-12.80: CS 12.95-13.03: HB 13.12-13.30: CS 13.34: DL 13.35: BP
				Is(50) d=0.04 a=0.04 MPa	13.0 9.7						
		13.50		UCS =2.7 MPa 13.50m			13.50m				
		0% NO CORE	93	Is(50) d=0.54 a=0.89 MPa	14.0 8.7		SILTSTONE: grey, dark grey, thinly laminated at 0°	MW to SW			13.70: DB 13.75: JT 45° CN ST S 13.84: DB 13.95-14.00: DB 14.04: BP 0° CN PR S 14.14: BP 0° CN PR S 14.15: BP 0° CN PR S 14.28: BP 0° CN PR S 14.30: BP 0° CN PR S 14.37: BP 0° CN PR S carbinacious 14.47: BP 0° CN PR S carbinacious 14.71: BP 0° CN PR S carbinacious 14.90: HB
		15.00		Is(50) d=0.1 a=0.23 MPa	15.0 7.7		15.00m BOREHOLE BH202 TERMINATED AT 15.00 m Target depth				
					16.0 6.7						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3 GLB Log RTA CORED DRILL HOLE 5 305001663_JS_HC.GPJ <<DrawingFile>> 12/Nov/2024 15:03 10.03.00.09

Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **4.0m to 4.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



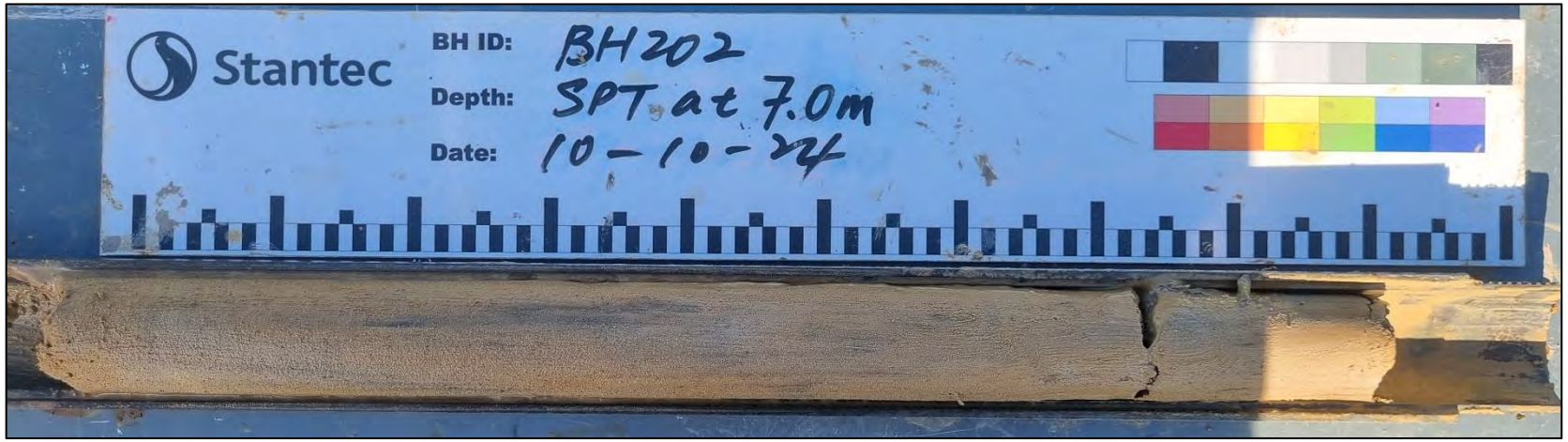


Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **5.5m to 5.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **7.0m to 7.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



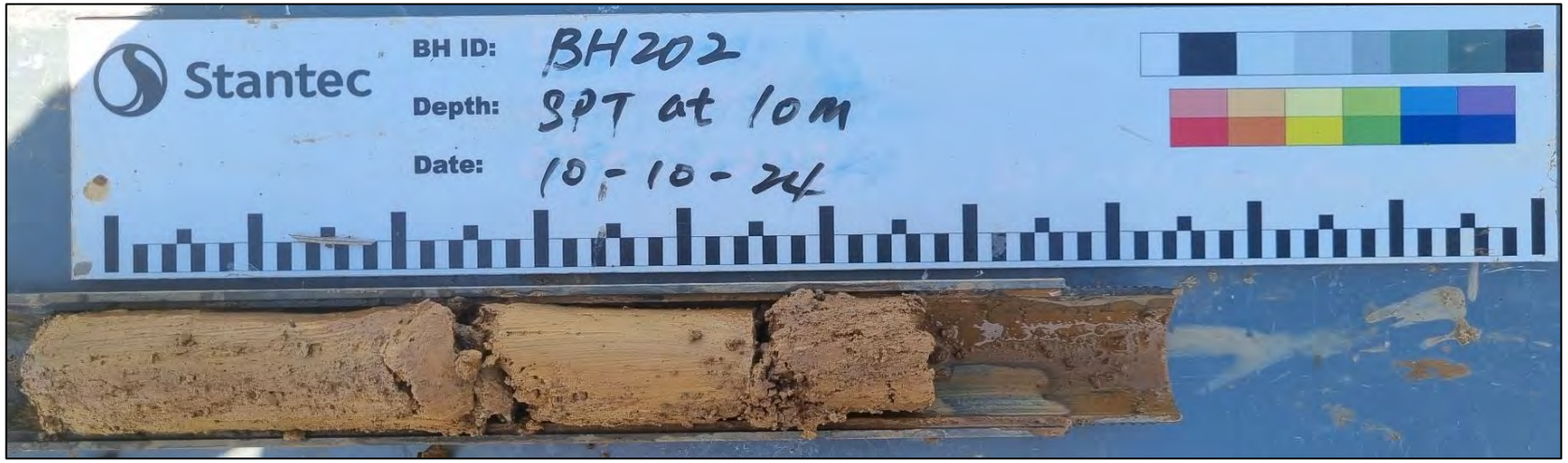


Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **8.5m to 8.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	SPT at: **10.0m to 10.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH202 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **10/10/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **11.6m to 15m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH203
FILE / JOB NO : 305001663
SHEET : 1 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292118.22, N: 6265319.75 (56 MGA20) SURFACE ELEVATION : 22.46 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 11/10/24 DATE COMPLETED : 11/10/24 DATE LOGGED : 11/10/24 LOGGED BY : RN CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T					0.0 22.5			0.10m TOPSOIL: CLAYEY SANDY SILT: brown, low plasticity, fine grained sand, low plasticity clay, with organic matters (grass, rootlets)	M		TOPSOIL
								FILL: GRAVELLY SILTY CLAY: brown-grey, medium to high plasticity, angular to subangular sandstone / shale gravel, trace of cobble size shale fragment. Appeared to be compacted			FILL
				1.00m SPT 8, 10, 8 Nc=18	1.0 21.5						
				1.45m							
					2.0 20.5				M		
				2.50m SPT 3, 5, 5 Nc=10				color change to dark grey at 2.5m			
				2.95m	3.0 19.5						
				4.00m SPT 1, 2, 3 Nc=5	4.0 18.5			4.00m FILL: SILTY CLAY: dark grey, trace angular to subangular sandstone / shale. gravel			
				4.45m					M		
					5.0 17.5			at 5.0m to 5.5m, possibly with cobble to boulder size sandstone and shale fragments			5.00: moderate to high auger resistance, possibly cobble to boulder size sandstone fragments, recovered as fine to medium pale grey sand with sandstone gravels
			water strike	5.50m SPT 4, 4, 6 Nc=10				5.50m SILTY CLAY: brown grey, medium to high plasticity, with fine grained sand			ALLUVIUM
				5.95m 6.00m DS	6.0 16.5		CI-CH		M	St	
				7.00m SPT 3, 3, 5 Nc=8	7.0 15.5			7.00m SANDY SILTY CLAY: orange brown, medium to high plasticity, fine grained sand, trace fine, sub-rounded gravel			
				7.45m			CI-CH		M	St	
					8.0 14.5						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:16 10.03.00.09

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH203
FILE / JOB NO : 305001663
SHEET : 2 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292118.22, N: 6265319.75 (56 MGA20) SURFACE ELEVATION : 22.46 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 11/10/24 DATE COMPLETED : 11/10/24 DATE LOGGED : 11/10/24 LOGGED BY : RN CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T				8.50m SPT 4, 6, 6 Nc=12 8.95m	8.0 14.5		CI-CH	SANDY SILTY CLAY: orange brown, medium to high plasticity, fine grained sand, trace fine, sub-rounded gravel *(continued)*	M	St	ALLUVIUM
								8.50m CLAYEY SAND: orange brown and pale grey, fine grained sand, high to high plasticity			
					9.0 13.5		SC		M	MD	
WB				10.00m SPT 6, 8, 8 Nc=16 10.45m	10.0 12.5			10.20m SILTY CLAY: brown, orange brown, medium to high plasticity, with ironstone gravel, fine to medium, sub-angular			POSSIBLE RESIDUAL SOIL
					11.0 11.5		CI-CH		M	VSt	
								11.70m Continued as Cored Drill Hole			
					12.0 10.5						
					13.0 9.5						
					14.0 8.5						
					15.0 7.5						
					16.0 6.5						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:16 10.03.00.09

CORED DRILL HOLE LOG

HOLE NO : BH203
FILE / JOB NO : 305001663
SHEET : 3 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292118.22, N: 6265319.75 (56 MGA20) | SURFACE ELEVATION : 22.46 (AHD) | ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 | MOUNTING : Track | CONTRACTOR : Traccess | DRILLER : SK

DATE STARTED : 10/11/24 | DATE COMPLETED : 10/11/24 | DATE LOGGED : 10/11/24 | LOGGED BY : RN | CHECKED BY :

CASING DIAMETER : | BARREL (Length) : | BIT : | BIT CONDITION :

DRILLING					MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(NO CORE PER RUN %) DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral (VL -0.1, L -0.3, M -1.0, H -3.0, VH -10.0, EH)	NATURAL FRACTURE (mm) (20, 40, 100, 300, 1000)	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					8.0 14.5						
					9.0 13.5						
					10.0 12.5						
					11.0 11.5						
							11.70m START CORING AT 11.70m				
NMLC		0% NO CORE	68		12.0 10.5		SILTSTONE: orange-brown, 0-5% sandstone, ironstrained. 12.6-12.86 ironstone clast subrounded	EW HW EW HW EW HW MW			11.70-11.80: EWS Clay 11.87-11.90: CZ ironstone 11.90-11.97: EWS Clay 12.00: HB 12.10-12.20: EWS Clay 12.30: DB
				Is(50) d=0.05 a=0.07 MPa			at 12.6 to 12.86, with ironstone clast, fine to medium, subrounded				12.60: BP 0° CN PR S
					13.0 9.5			EW HW			12.92: BP 0° CN PR S 12.95-13.00: SM Clay 13.08: BP 0° SN PR S 13.12-13.16: SM Clay
							13.15m SILTSTONE: dark grey and grey, laminated at 0° -10°	MW SW			13.30-13.33: SM Clay 13.50: DB
				Is(50) d=0.18 a=0.21 MPa	14.0 8.5		at 13.8 to 13.85, color change to dark black, carbonaceous	MW			13.71-13.73: SM Clay 13.73-13.84: CZ carbonacious 14.00: HB
		14.60						EW MW			14.20-14.26: EWS Clay 14.45: JT 20° CN CU S
		0% NO CORE 15.00	100	UCS =1.7 MPa 14.82m Is(50) d=0.19 a=0.12 MPa							14.60: DL 14.70: BP 0° CN CU S
					15.0 7.5		15.00m BOREHOLE BH203 TERMINATED AT 15.00 m Target depth				15.00: DL
					16.0 6.5						

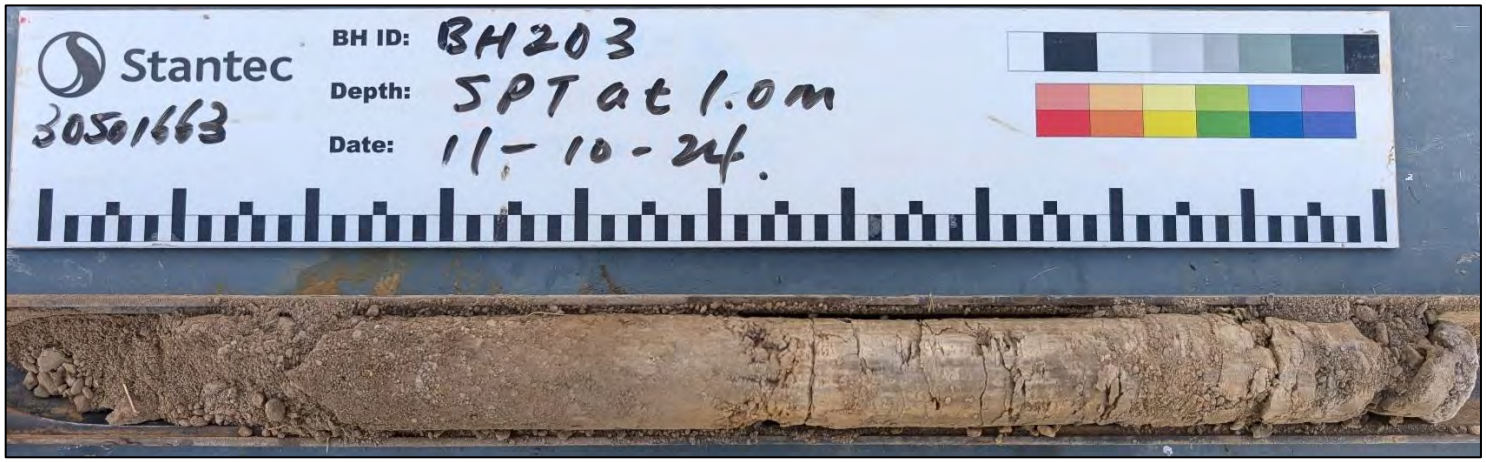
See Explanatory Notes for details of abbreviations & basis of descriptions.

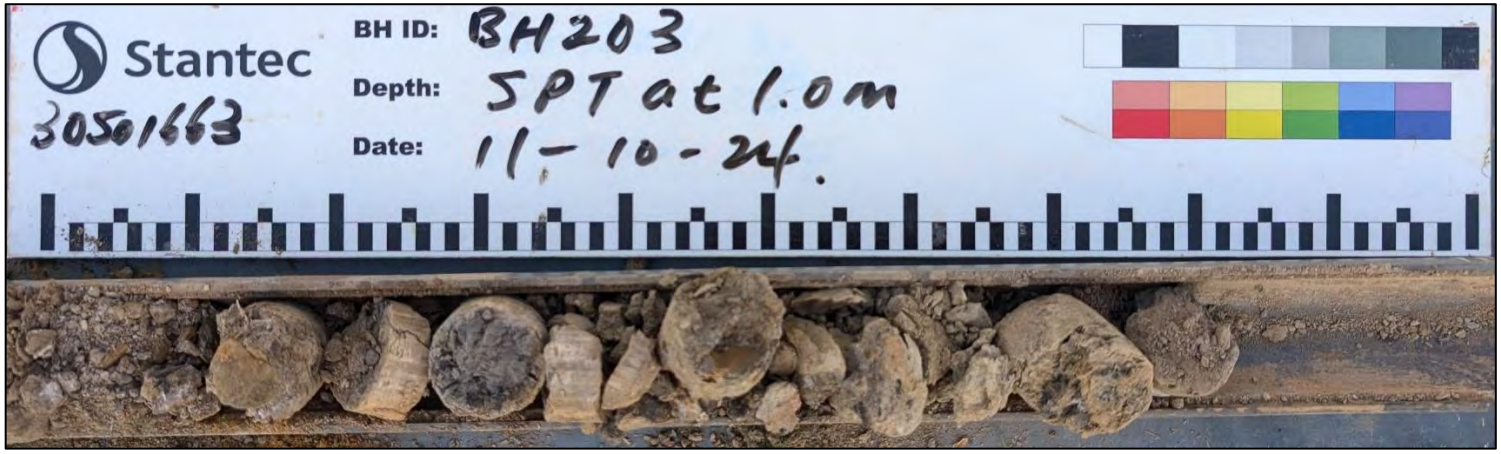
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Stantec

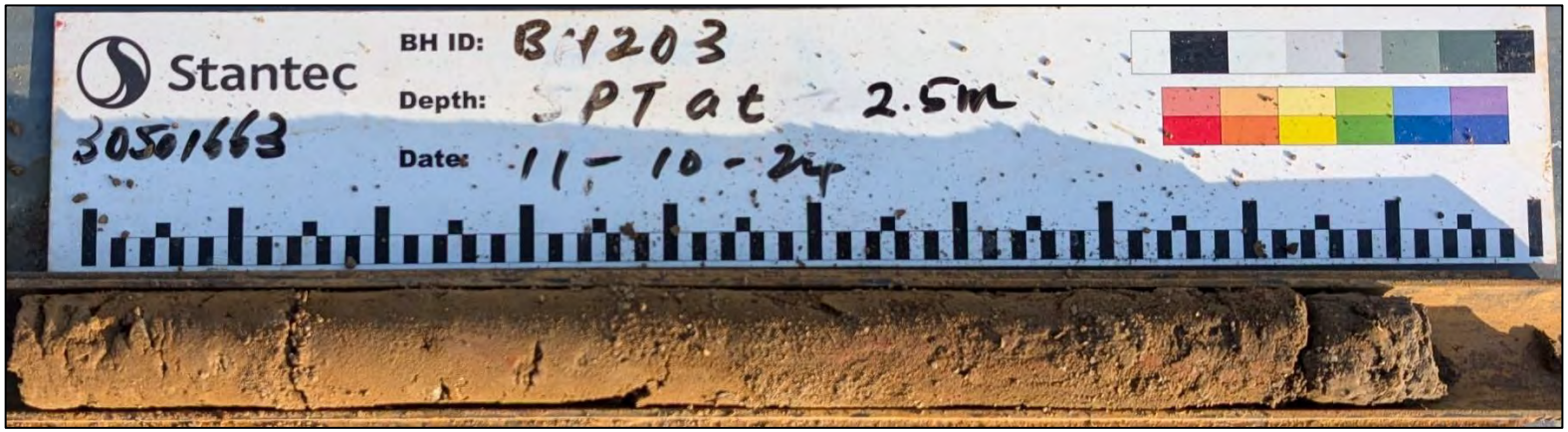
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Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



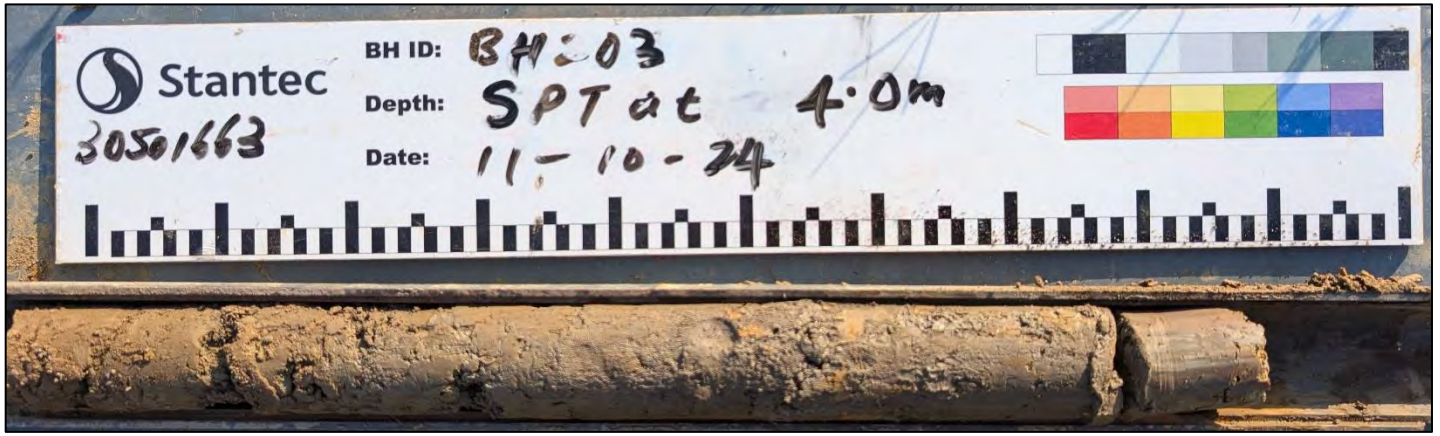


Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **2.5m to 2.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



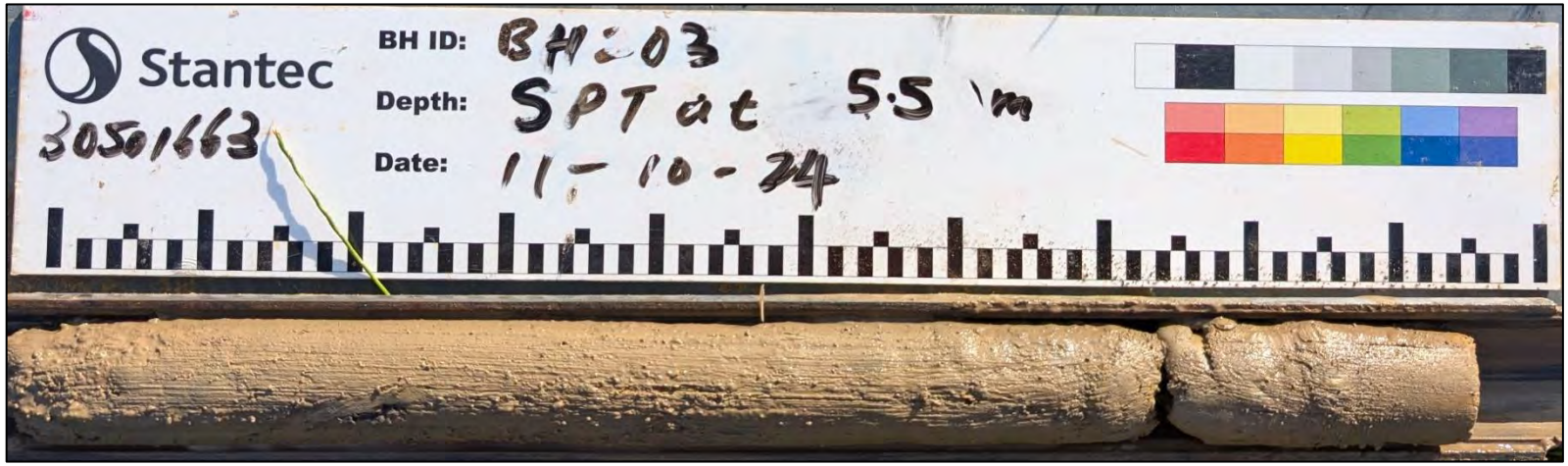


Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **4.0m to 4.34m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



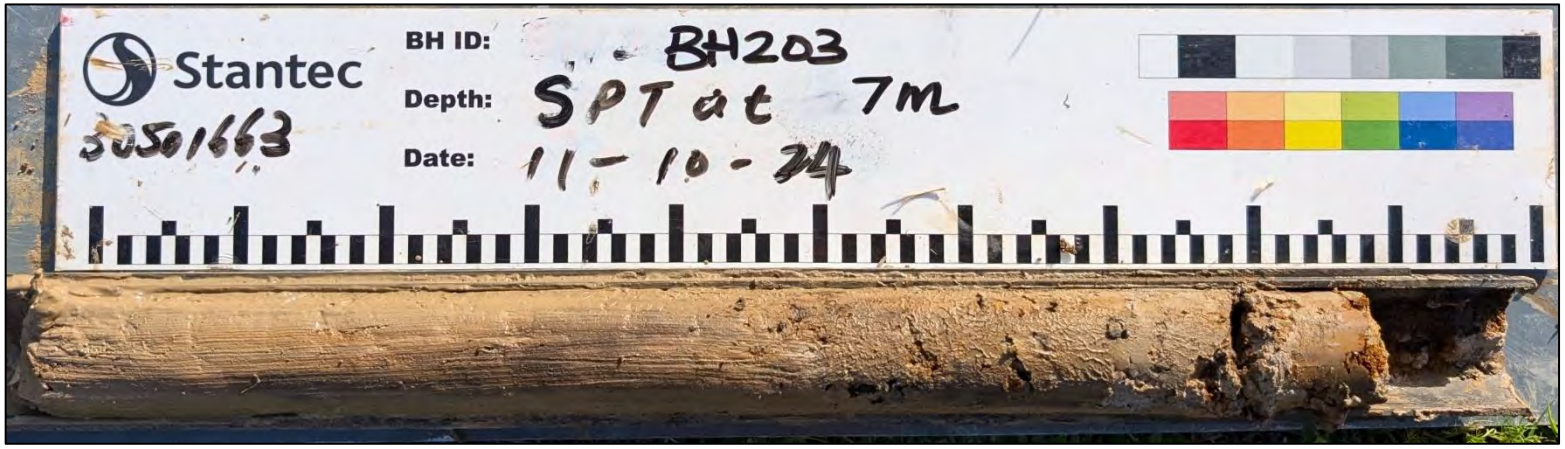


Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **5.5m to 5.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **7.0m to 7.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **8.0m to 8.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



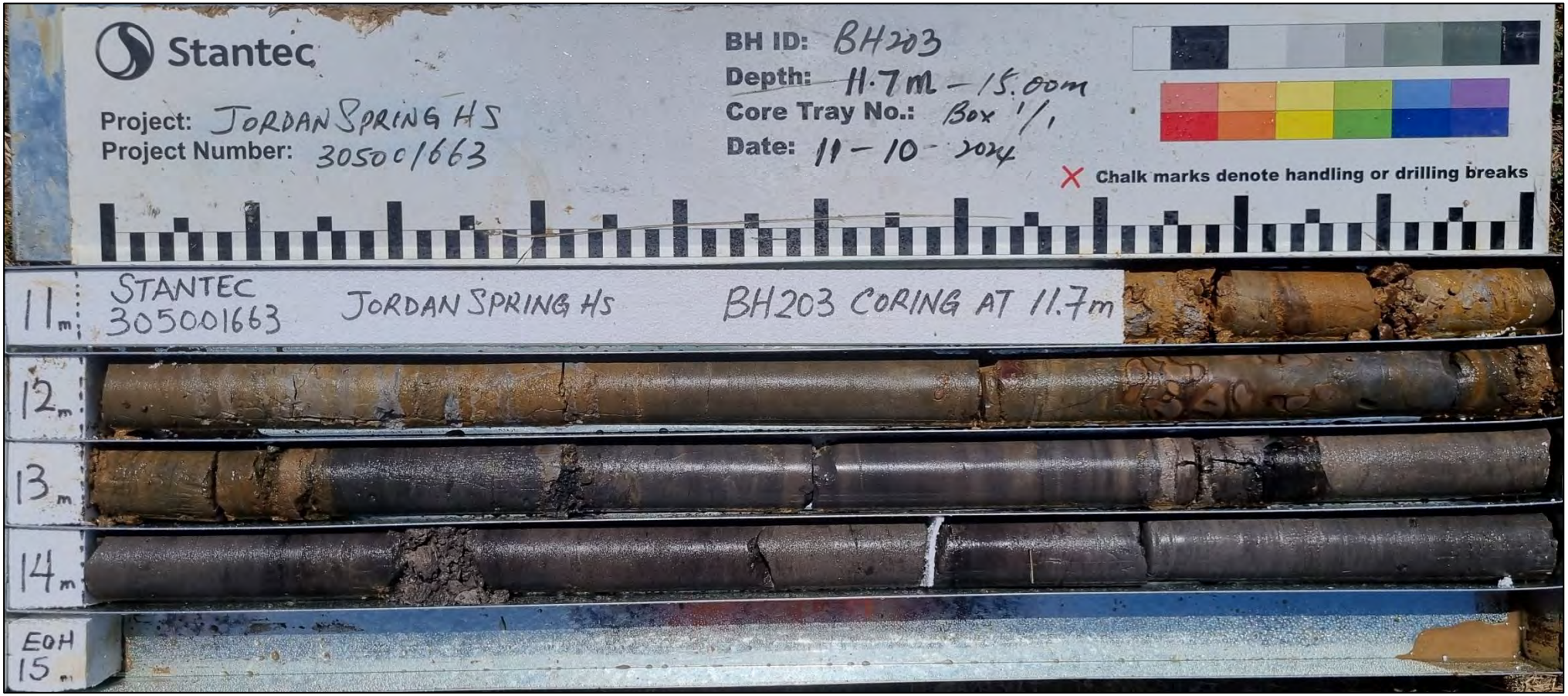


Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	SPT at: **10.0m to 10.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH203 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **11/10/2024**	INCLINATION: **-90 degree**	CORED LENGTH: **BOX 1 OF 1** **11.7m to 15.16m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO :BH204
FILE / JOB NO : 305001663
SHEET : 1 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292121.46, N: 6265359.70 (56 MGA20) SURFACE ELEVATION : 22.24 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 2/10/24 DATE COMPLETED : 2/10/24 DATE LOGGED : 2/10/24 LOGGED BY : HC CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T			water level		0.0 (22.2)			0.20m TOPSOIL: CLAYEY SANDY SILT: brown, low plasticity, fine grained sand, low plasticity clay, with organic matters (grass, rootlets)			TOPSOIL
				1.00m SPT 4, 10, 6 Nc=16 1.45m	1.0 (21.2)			FILL: SILTY SANDY GRAVEL: brown, grey, fine to medium gravel, angular, medium grained sand, with medium plasticity clay, trace of concrete and brick fragment, trace of cobble size shale fragments. Appeared to be compacted			FILL
					2.0 (20.2)			2.00m FILL: SILTY SANDY CLAY: orange brown, medium to high plasticity, fine to medium grained sand, trace subangular gravel, Appeared to be compacted			
				2.50m SPT 4, 3, 5 Nc=8 2.95m					M		
					3.0 (19.2)			at 3.1 to 3.4m, cobble to boulder size sandstone			3.30: moderate to high auger resistance, possibly cobble to boulder size sandstone fragments
				4.00m SPT 4, 6, 5/40mm Nc=R 4.34m	4.0 (18.2)			4.00m FILL: SILTY SANDY CLAY: brown, grey, medium to high plasticity, fine to medium grained sand, with subangular gravel, Appeared to be compacted			
					5.0 (17.2)						
				5.50m SPT 2, 2, 2 Nc=4 5.95m				5.50m FILL: SILTY CLAY: brown, medium to high plasticity, trace subangular gravel			
					6.0 (16.2)						
								6.50m SILTY SANDY CLAY: orange brown, medium to high plasticity, fine to medium sand, with subangular gravel	W		ALLUVIUM
				7.00m SPT 3, 5, 6 Nc=11 7.45m DS	7.0 (15.2)		CI-CH			St	
				8.00m	8.0 (14.2)			8.00m			

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:17 10.03.00.09

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : BH204
FILE / JOB NO : 305001663
SHEET : 2 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292121.46, N: 6265359.70 (56 MGA20) SURFACE ELEVATION : 22.24 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 MOUNTING : Track CONTRACTOR : Traccess DRILLER : SK

DATE STARTED : 2/10/24 DATE COMPLETED : 2/10/24 DATE LOGGED : 2/10/24 LOGGED BY : HC CHECKED BY :

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/T				8.50m SPT 8, 6, 8 Nc=14 8.95m	8.0 14.2			SILTY SANDY CLAY: orange brown, medium to high plasticity, fine to medium sand, with subangular gravel			ALLUVIUM
					9.0 13.2		CI-CH			St	
				10.00m SPT 8, 9, 15 Nc=24 10.45m	10.0 12.2			10.00m SILTY SANDY CLAY: grey-orange-brown, medium to high plasticity, fine to medium sand, trace subangular gravel	W		
					11.0 11.2		CI-CH	11.70m		VSt	
					12.0 10.2			Continued as Cored Drill Hole			
					13.0 9.2						
					14.0 8.2						
					15.0 7.2						
					16.0 6.2						

See Explanatory Notes for details of abbreviations & basis of descriptions.

STANTEC AUSTRALIA PTY LTD

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RMS LIB 40.3 EXTERNAL REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 305001663_IS_HC.GPJ <<DrawingFile>> 22/Oct/2024 16:17 10.03.00.09

CORED DRILL HOLE LOG

HOLE NO : BH204
FILE / JOB NO : 305001663
SHEET : 3 OF 3

PROJECT : Proposed New High School in Jordan Springs
LOCATION : Infantry St, Jordan Springs East, NSW, 2747

POSITION : E: 292121.46, N: 6265359.70 (56 MGA20) | SURFACE ELEVATION : 22.24 (AHD) | ANGLE FROM HORIZONTAL : 90°

RIG TYPE : MD300 | MOUNTING : Track | CONTRACTOR : Traccess | DRILLER : SK

DATE STARTED : 10/2/24 | DATE COMPLETED : 10/2/24 | DATE LOGGED : 10/2/24 | LOGGED BY : HC | CHECKED BY :

CASING DIAMETER : | BARREL (Length) : | BIT : | BIT CONDITION :

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(NO CORE PER RUN %) DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.3 M -1.0 H -3.0 VH -10.0 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					8.0 14.2						
					9.0 13.2						
					10.0 12.2						
					11.0 11.2						
							11.70m START CORING AT 11.70m				
NMLC		0% NO CORE	79	Is(50) d=0.05 a=0.26 MPa	12.0 10.2		SILTSTONE: orange-brown, fine grained, 5% to 10% sandstone lamination at 0* to 10*, grey, with ironstain	MW HW MW	○ ●		11.92: BP 5° CN UN S 11.96-12.00: EWS 12.09: BP 5 - 10° IR RF 12.23-12.25: SM Clay 12.27: BP 5° CN PR S 12.43-12.45: JT 60 - 70° CN PR S
							12.62m				
		12.84 0% NO CORE	92		13.0 9.2		SILTSTONE: pale grey to grey, fine grained, 5% sandstone lamination at 0* to 10*, grey	SW	○ ●		12.65: BP 5° CN PR S 12.78: BP 5 - 10° CN UN S 12.87: BP 5° CN CU S 13.12: BP 10 - 30° CN IR S 13.24: BP 10 - 30° CN UN S 13.50: BP 10° CN CU S
				Is(50) d=0.34 a=0.59 MPa UCS =1.9 MPa 13.88m Is(50) d=0.06 a=0.32 MPa						13.70-13.72: JT 30° CN PR S 13.80: BP 5 - 10° CN IR S 13.94: BP 30 - 80° CN ST S
					14.0 8.2						
							SILTSTONE: pale grey to grey, fine grained, 5% to 10% sandstone lamination at 0* to 10*, grey				14.14: DB 14.23: BP 5° CN PR S 14.30: BP 5 - 10° CN CU S
							14.30m				
							SILTSTONE: dark grey, fine grained, 5% sandstone lamination at 0* to 10*, grey				14.42: DB 14.57: DB 14.70: BP 5 - 10° CN IR RF
		15.16			15.0 7.2		15.16m				14.95: JT 40° CN PR S 15.08-15.10: CZ
							BOREHOLE BH204 TERMINATED AT 15.16 m Target depth				
					16.0 6.2						

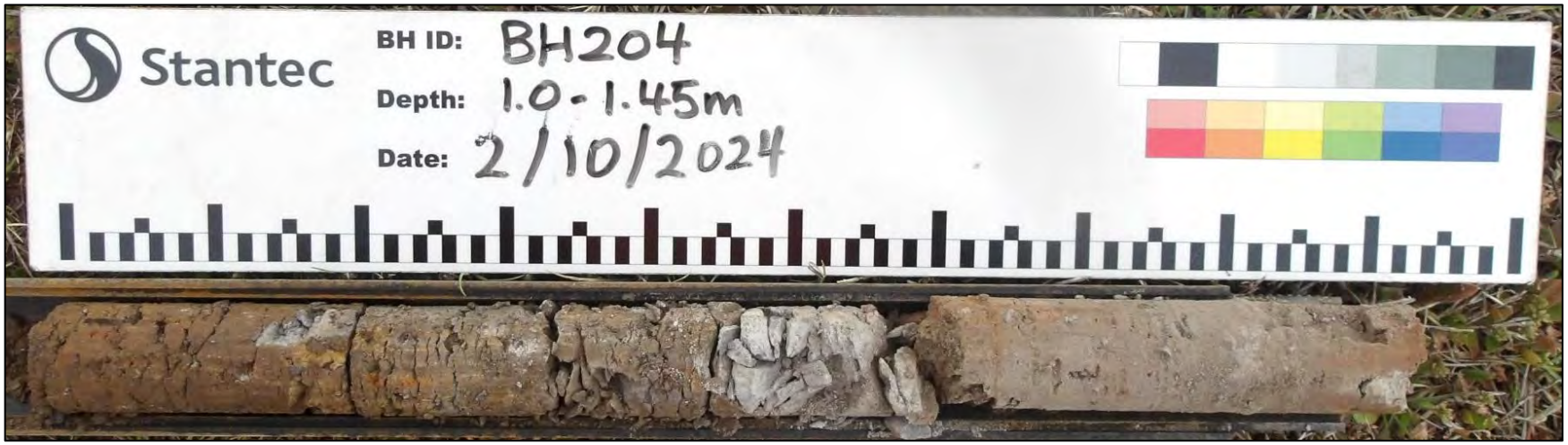
See Explanatory Notes for details of abbreviations & basis of descriptions.

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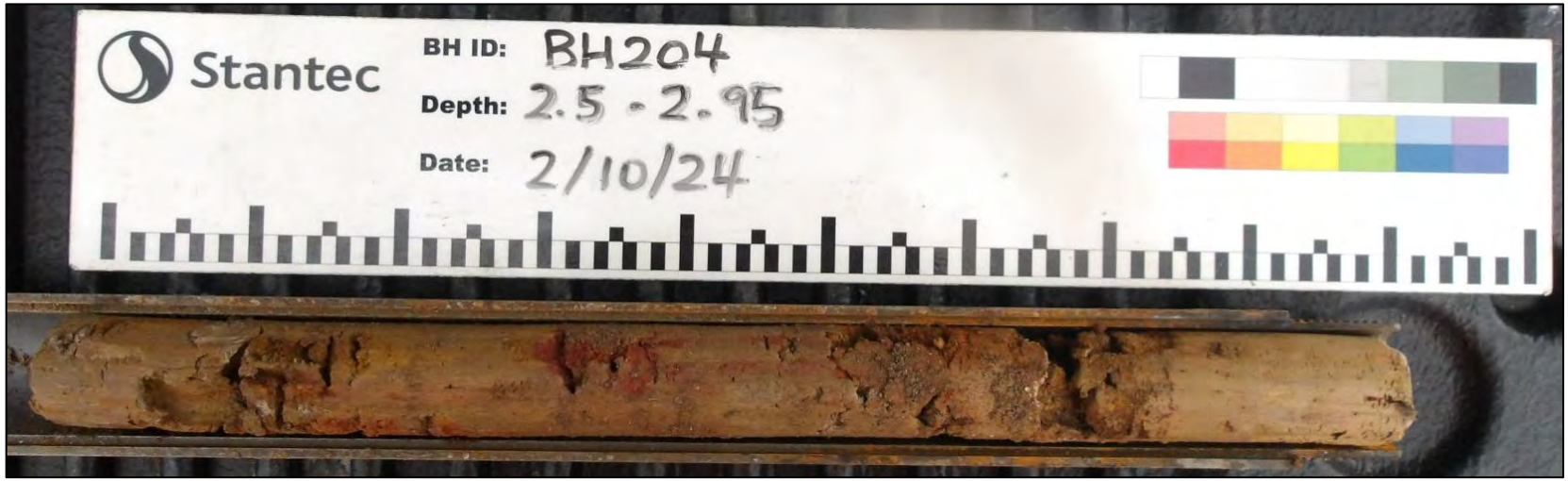
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Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **1.0m to 1.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



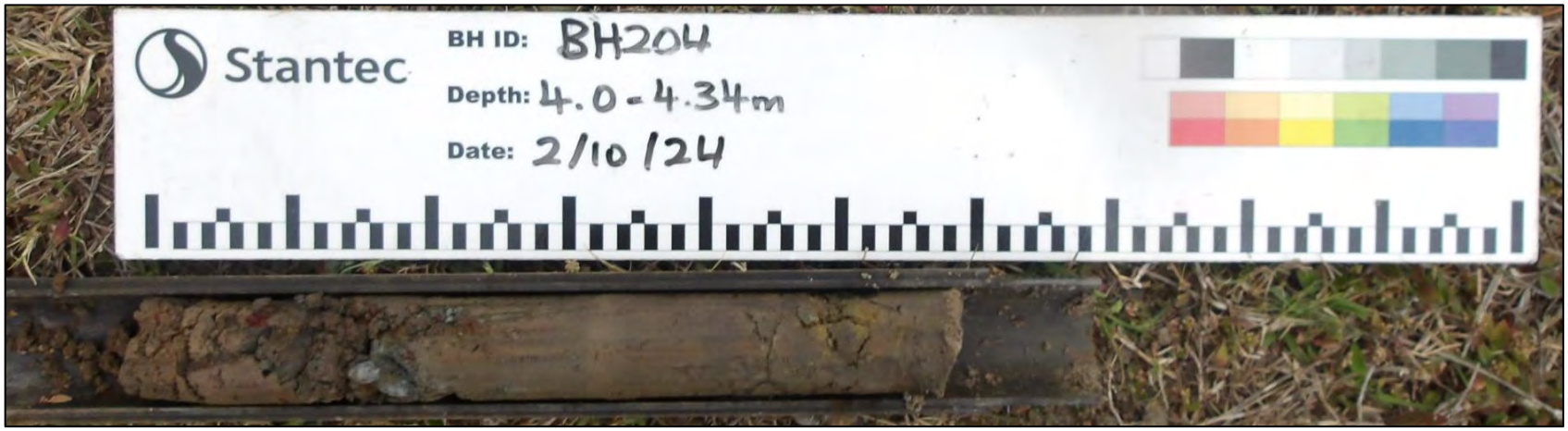


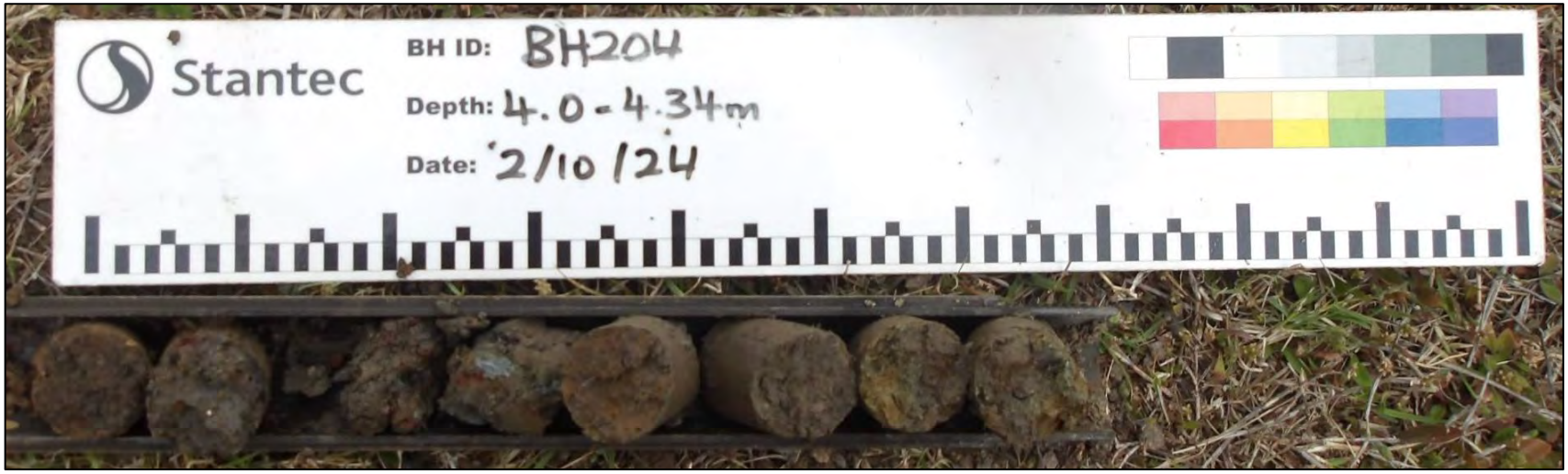
Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **2.5m to 2.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



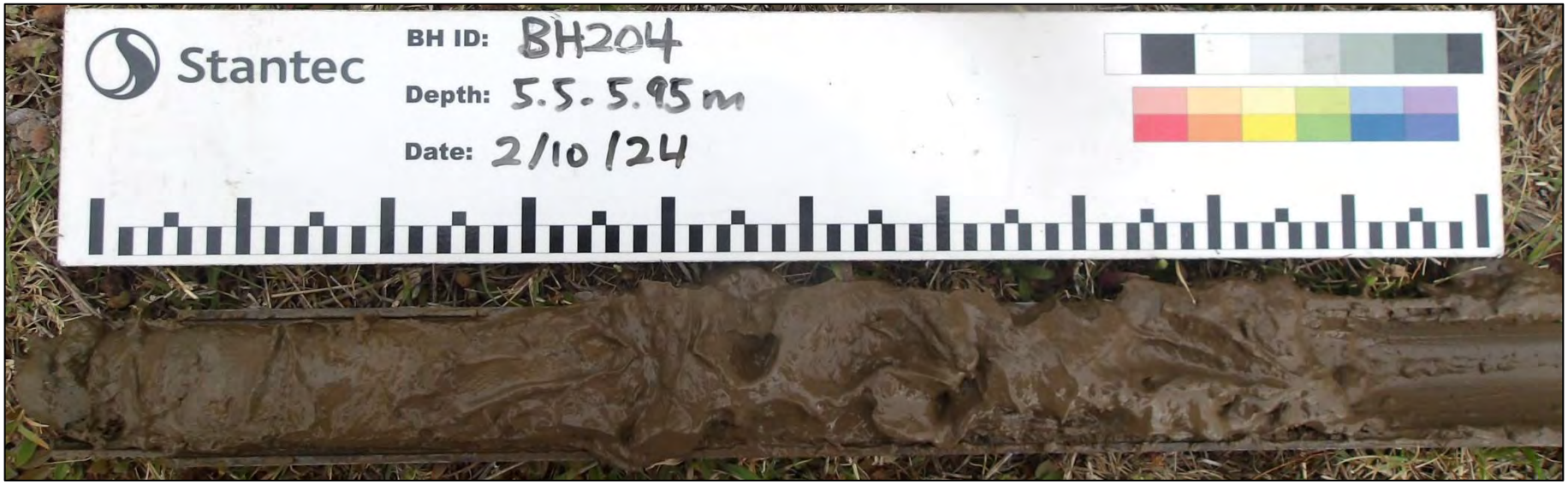


Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **4.0m to 4.34m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **5.5m to 5.95m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **7.0m to 7.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **8.0m to 8.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



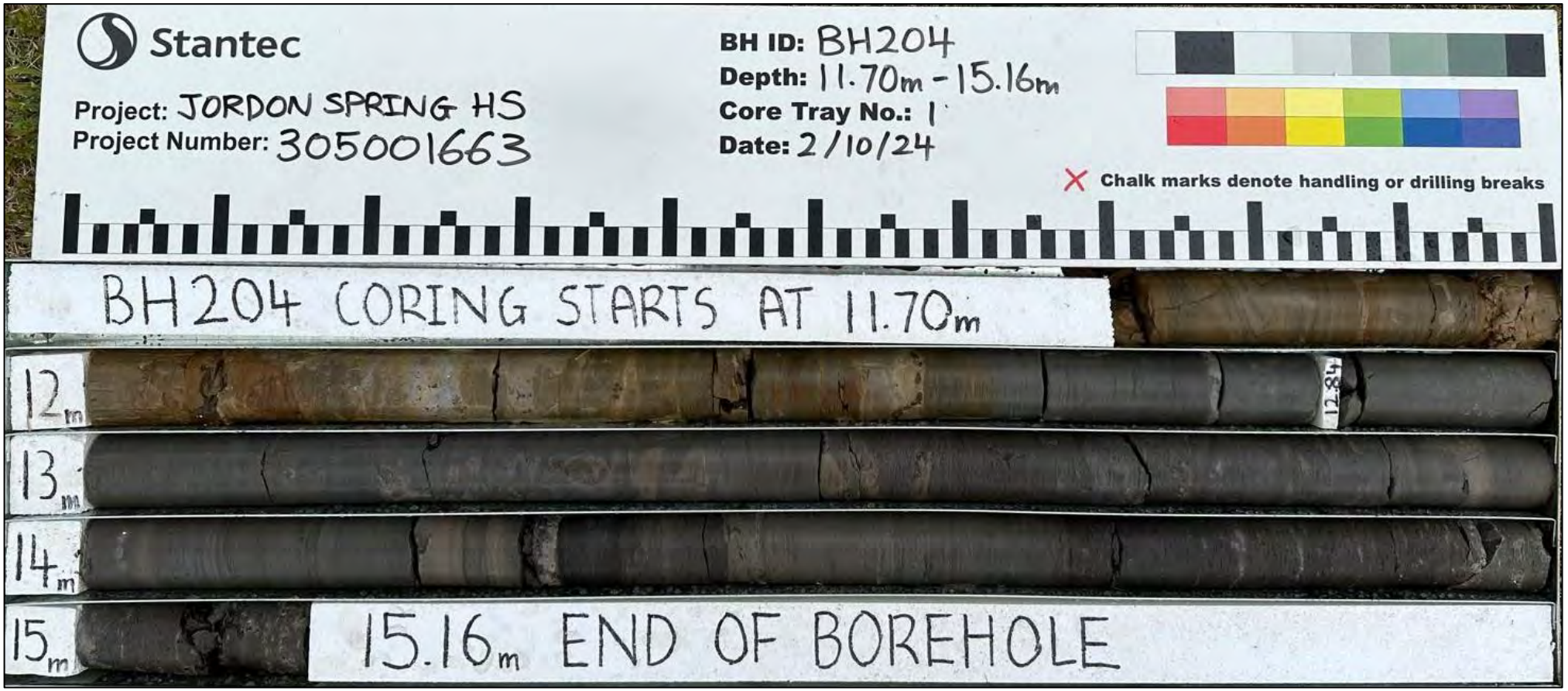


Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **10.0m to 10.45m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**





Stantec	TITLE: Borehole Core Photographs – BH204 **Proposed New High School in Jordan Springs**			
	PROJECT NO: **305001663**	TEST DATE: **02/10/2024**	INCLINATION: **-90 degree**	SPT at: **11.7m to 15.16m**
	DRILL RIG: **MD 300**	CONTRACTOR: **Traccess Drilling**	LOGGED BY: **HC**	CHECKED BY: **AS**



Borehole Record: SED01

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 08/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	-		Fill		Clayey to silty SAND SC: low plasticity clay, light gret/grey, loose, medium grained, with fine sized gravel, wet, no odour , no staining, no observed asbestos containing material.	W				
42					**SED01 refusal at 0.2m (refusal on large gravels.)**					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: SED02

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 08/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42			Fill		Clayey to silty SAND SC: low plasticity clay, lighr grey, loose, medium grained, trace medium sized gravel, wet, slight compost odour, no staining, no observed asbestos containing material.	W				
					SED02 Terminated at 0.5m (target depth)					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

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Borehole Record: SED03

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 08/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42			Fill		Clayey to silty SAND SC: low plasticity clay, light grey/yellow, very loose, medium grained, trace medium sized gravel, wet, slight compost odour, no staining, no observed asbestos containing material.	W				
					SED03 Terminated at 0.5m					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

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Borehole Record: SED04

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 08/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42			Fill		Clayey to silty SAND SC: low plasticity clay, grey, very loose, medium grained, with medium sized gravel, wet, light yellow inclusion @ 0.2mbgl. slight compost odour, no staining, no observed asbestos containing material.	W				
					SED04 Terminated at 0.5m					
41	1									
40	2									
39	3									
38	4									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: SED05

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 08/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
			Fill		Clayey to silty SAND SC: low plasticity clay, lighr grey, loose, medium grained, trace medium sized gravel, wet, firm @ 0.25mbgl. yellow inclusions @ 0.1mbgl. slight compost odour, no staining, no observed asbestos containing material.	W				
42					**SED05 refusal at 0.3m (Refusal - compact sediment)**					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: SED06

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 08/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
			Fill		Clayey to silty SAND SC: low plasticity clay, light grey/yellow, very loose, medium grained, with medium sized gravel, wet, compact @ 0.1mbgl. slight compost odour, no staining, no observed asbestos containing material.	W				
42					**SED06 refusal at 0.25m (Compact Sediment)**					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: SED07

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 08/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42.05	0.25		Fill		Sandy SILT ML: non-plastic, dark grey, very soft, fine grained sand, with medium sized gravel, trace low plasticity clay, wet, sample from discharge point. slight compost odour, no staining, no observed asbestos containing material.	W				
42					Clayey to silty SAND SC: low plasticity clay, light grey/yellow, very loose, medium grained, with medium sized gravel, wet, slight compost odour, no staining, no observed asbestos containing material.					
					SED07 Terminated at 0.5m (Target depth)					
	1									
41										
	2									
40										
	3									
39										
	4									
38										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: SED08

Stantec

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 08/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0		Fill		Clayey to silty SAND SC: low plasticity clay, grey/light grey, very loose, fine to medium grained, with medium sized gravel, wet, slight compost odour, no staining, no observed asbestos containing material.	W				
					SED08 refusal at 0.15m (Firm ground (potential geo-fabric))					
42										
	1									
41										
	2									
40										
	3									
39										
	4									
38										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Test Pit Record: TP01

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0		Fill		Sandy GRAVEL GW: pale grey, fine to coarse sized, trace cobbles. .					
	0.4				Gravelly CLAY CL: non-plastic to low, pale grey, fine to coarse sized gravel, inorganic, slightly moist to dry, angular gravels, pvc plastic encountered at 0.7m bgl, brick/cloth encountered at 1.0m bgl. brick to fabric to plastic pieces, no odour , no staining, no observed asbestos containing material.	SLM-D				
	1									
	1.3				Gravelly to sandy CLAY CH: high plasticity, red mottled grey, fine to coarse sized gravel, fine to coarse grained sand, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	1.6				Gravelly to sandy CLAY CI: medium plasticity, brown mottled grey, coarse sized gravel, fine to coarse grained sand, inorganic, slightly moist, cobble boulders observed. metal post encountered at 2.6m bgl. . no odour , no staining.					
	2									
	3									
	3				Gravelly to clayey SAND SC: grey, coarse grained, fine to coarse sized gravel, moist, angular gravels.. no odour .	M				
	3.2				Gravelly to sandy CLAY CI: medium plasticity, grey pale, medium to coarse sized gravel, fine to coarse grained sand, inorganic, cobble boulders encountered..					
	4				**TP01 Terminated at 3.6m (Achieved target depth)**					

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Test Pit Record: TP02

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0		Fill		Silty SAND SM: brown, fine grained, dry, organics (rootlets).	D				
	0.15				Gravelly to clayey SAND SC: grey, fine to coarse grained, fine to coarse sized gravel, dry.					
	0.35				Gravelly to silty CLAY CI: medium plasticity, grey and brown, fine to coarse sized gravel, with fine to coarse grained sand, inorganic, slightly moist.	SLM				
	1									
	1.7				Silty CLAY CI: medium plasticity, orange with mottled grey, with fine to coarse sized gravel, inorganic, slightly moist.					
	2				Gravelly to silty CLAY CI: medium plasticity, grey brown, inorganic, slightly moist.					
	2.5				Gravelly SAND SP: red, coarse sized gravel, with low to high plasticity clay, moist.	M				
	3				Gravelly to sandy CLAY CH: high plasticity, grey mottled brown, coarse sized gravel, inorganic, slightly moist, with some brick to metal to ash , slight odour.	SLM				
	4				**TP02 Terminated at 3.7m (Target depth achieved)**					

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Test Pit Record: TP03

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.2		Fill		Silty SAND SM: brown, fine to medium grained, trace fine to coarse sized gravel, dry, brick to glass dust.	D				
	0.5				As above, but pale grey, fine to coarse grained, with fine to coarse sized gravel.					
	0.7				Silty CLAY CI: medium plasticity, brown mottled grey and orange, organic, slightly moist to dry, trace glass .	SLM-D				
	1				Silty CLAY pale grey mottled orange, inorganic, slightly moist.	SLM				
	1.4				Silty CLAY CI: medium plasticity, brown mottled red and orange, trace fine to coarse sized gravel, inorganic, slightly moist, slate boulders (400mm diameter).					
	2				Gravelly to silty CLAY CL: low plasticity, grey and brown, fine to coarse sized gravel, inorganic, slightly moist, ceramic , no odour , no staining, no observed asbestos containing material.					
	2.4				As above, but Silty SAND SM: pale brown mottled grey and red, fine to medium grained, trace fine to coarse sized gravel, slightly moist to dry, brick to glass dust, no observed asbestos containing material.					
	3					SLM-D				
	4				**TP03 Terminated at 3.7m (Target depth achieved)**					

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Test Pit Record: TP04

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.2		Fill		Sandy SILT ML: low plasticity, brown with orange, dry, with organics (rootlets). no observed asbestos containing material.	D				
	0.6				Silty CLAY CL-CI: low to medium plasticity, pale brown and grey, inorganic, slightly moist.	SLM				
	0.7				GRAVEL GW: grey and black, fine to coarse sized, slightly moist.					
	1				Gravelly CLAY CI: medium plasticity, grey, fine to coarse sized gravel, inorganic, slightly moist.					
	1.6				Clayey SAND SC: pale grey, fine to coarse grained, with fine to coarse sized gravel, dry.	D				
	2				As above, but moist, increased clay as above. .	M				
	2.3				Clayey GRAVEL GC: low to medium plasticity clay, pale grey, fine to coarse sized, moist.					
	2.5				Silty CLAY CI: medium plasticity, brown with orange and grey, inorganic, slightly moist.	SLM				
	3									
	4				**TP04 Terminated at 3.7m (Achieved target depth)**					

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Test Pit Record: TP05

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.2		Fill		Silty CLAY CI: medium plasticity, pale brown, trace fine to coarse sized gravel, trace fine to medium grained sand, inorganic, slightly moist to dry.	SLM-D				
	0.5				Gravelly CLAY CL: low plasticity, brown, medium to coarse sized gravel, inorganic, slightly moist to dry, trace fine to coarse grained sands. no odour , no staining.					
	1				Gravelly SAND SP: pale brown and grey, medium grained, fine to coarse sized gravel, dry, no odour , no staining.	D				
	1				Gravelly CLAY ML: non-plastic, grey, medium to coarse sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	1.7				Gravelly to sandy CLAY CI: medium plasticity, red mottled brown, fine to coarse sized gravel, with low to high plasticity silt, inorganic, slightly moist.					
	2				Sandy CLAY CL: low plasticity, grey, fine to coarse grained sand, inorganic, moist.	M				
	2.9				Gravelly to silty CLAY CI: medium plasticity, red brown grey and white, fine to coarse sized gravel, inorganic, moist.					
	3									
	4				**TP05 Terminated at 3.5m (Achieved target depth)**					

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Test Pit Record: TP06

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.15		Fill		Sandy to silty GRAVEL GM: grey brown, medium to coarse sized, fine grained sand, dry.	D				
					As above, but organics (rootlets).					
	0.5				Silty CLAY CI: medium plasticity, pale brown, inorganic, slightly moist.	SLM				
	1									
	1.1				Clayey GRAVEL GC: grey, medium to coarse sized, with fine grained sand, moist.	M				
	1.7				Gravelly to silty CLAY CI: medium plasticity, brown orange mottled red, fine to coarse sized gravel, inorganic, slightly moist.	SLM				
	2									
	2.5				Gravelly to sandy CLAY CH: high plasticity, brown grey red pink mottled, medium to coarse sized gravel, fine to coarse grained sand, inorganic, slightly moist.					
	3									
					TP06 Terminated at 3.8m (Achieved target depth)					
	4									

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Test Pit Record: TP07

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 09/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.1		Top Soil		Clayey SILT ML: low plasticity, brown dark, trace fine sized gravel, dry, with organics (grass and rootlets).	D				
			Fill		Gravelly to silty CLAY CL: low plasticity, brown, coarse sized gravel, inorganic, dry, no odour , no staining.					
	1									
	1.8				Gravelly to silty CLAY CL-CI: low to medium plasticity, fine to coarse sized gravel, inorganic, moist, cobble size shale fragments. no odour , no staining, no observed asbestos containing material.	M				
	2				Silty CLAY CL-CI: low to medium plasticity, grey and brown, with fine to coarse sized gravel, trace fine grained sand, inorganic, moist, shale cobble and boulders encountered. no odour , no staining, no observed asbestos containing material.					
	3				Sandy GRAVEL GW: pale white grey, fine to coarse sized, fine grained sand, trace low to high plasticity clay, sandstone cobbles and boulders, pacm (potential asbestos containing materials) observed at 3.0m bgl, anthropogenics at 3.5m bgl. brick to metal to concrete to ceramic fragments, no odour , no staining, acm observed.					
					TP07 Terminated at 3.5m (Achieved target depth)					
	4									

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Test Pit Record: TP08

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0		Fill		Sandy SILT ML: low plasticity, pale brown, fine grained sand, trace fine to medium sized gravel, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	0.5				Silty CLAY CI: medium plasticity, pale brown, with fine to coarse sized gravel, inorganic, slightly moist.					
	1				Silty CLAY CI: medium plasticity, grey, trace coarse sized gravel, inorganic, slightly moist.					
	1.9				Silty CLAY CH: high plasticity, brown, soft, with fine to coarse sized gravel, trace fine grained sand, inorganic, slightly moist.					
	2				Silty CLAY CI: medium plasticity, brown, soft to firm, with fine to coarse sized gravel, trace fine grained sand, inorganic, moist, shale boulders (~500mm) encountered at 2.2m bgl. . no odour , no staining, no observed asbestos containing material.	M				
	2.2				Gravelly CLAY CH: high plasticity, brown grey, fine to coarse sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	2.6				Silty CLAY CI: medium plasticity, pale brown and grey, soft to firm, with fine to coarse sized gravel, inorganic, slightly moist, with some metal to plastic , no odour , no staining, no observed asbestos containing material.					
	3									
	4				**TP08 refusal at 3.2m (Encountered gravelly cement)**					

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Test Pit Record: TP09

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0		Fill		Clayey SILT ML: low plasticity clay, low plasticity, pale brown, with medium to coarse sized gravel, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	0.5				Silty CLAY CL: low plasticity, light brown and grey, with fine to coarse sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	1									
	1.4				Clayey GRAVEL GC: grey, loose to medium dense, coarse sized, moist, slate boulders encountered at 1.5m bgl. no odour , no staining, no observed asbestos containing material.	M				
	1.5				Silty CLAY CL: low plasticity, pale brown and grey, with fine to coarse sized gravel, inorganic, slightly moist.	SLM				
	1.9				Gravelly to silty CLAY CH: high plasticity, brown mottled pale grey, fine to medium sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	2									
	2.6				Clayey GRAVEL GC: pale brown and grey, fine to coarse sized, trace fine to coarse grained sand, slightly moist, anthropogenics encountered from 2.8m to 3.1m bgl. brick to concrete to ash to metal fragments, strong compost odour, no staining, no observed asbestos containing material.					
	3									
					TP09 Terminated at 3.7m (Achieved target depth)					
	4									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Test Pit Record: TP10

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.2		Top Soil		Gravelly to clayey SILT ML: low plasticity, pale brown and grey, fine to coarse sized gravel, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
			Fill		As above, but organics (rootlets). no odour , no staining, no observed asbestos containing material.					
	1									
	1.1				Clayey GRAVEL GC: grey, fine to coarse sized, moist, slate boulders. no odour , no staining, no observed asbestos containing material.	M				
	2									
	2.7				Gravelly CLAY CL: low plasticity, yellow brown, fine to medium sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	2.9				Silty CLAY CL: low plasticity, orange brown, inorganic, slightly moist.					
	3									
	4				**TP10 Terminated at 3.8m (Achieved target depth)**					

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Test Pit Record: TP11

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.2		Fill		Gravelly to silty CLAY CL: low plasticity, brown grey, fine to coarse sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
	0.4				Gravelly to silty CLAY CL: low plasticity, brown and grey, fine to coarse sized gravel, organic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	1				Gravelly to sandy CLAY CI: medium plasticity, yellow and brown grey, fine to coarse sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	1				Gravelly to silty CLAY CI: medium plasticity, grey, fine sized gravel, inorganic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	2									
	2.2				Clayey SILT ML: medium plasticity, pale brown mottled orange brown, slightly moist, no odour , no staining, no observed asbestos containing material.					
	2.6				Silty CLAY CH: high plasticity, reddish brown, organic, slightly moist, no odour , no staining, no observed asbestos containing material.					
	3									
	4				**TP11 Terminated at 3.4m (Achieved target depth)**					

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Test Pit Record: TP12

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Excavator** 14 T
Loc Comment:	**Elevation:** Not Surveyed	**Excavator Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Brock Collinson

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
	0.1		Fill		Gravelly to silty CLAY CH: high plasticity, grey brown, fine to coarse sized gravel, organic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
					As above, but inorganic, no odour , no staining, no observed asbestos containing material.					
	1									
	1				Gravelly to silty SAND SM: yellow and grey brown, fine to medium grained, fine to medium sized gravel, dry, encountered sandstone cobbles and boulders. no odour , no staining, no observed asbestos containing material.	D				
	1.25				Clayey to silty GRAVEL GC: grey, fine to coarse sized, trace fine to coarse grained sand, moist, no odour , no staining, no observed asbestos containing material.	M				
	1.8				Gravelly to silty CLAY CH: high plasticity, brown mottled grey orange, fine to coarse sized gravel, inorganic, slightly moist, observed potential colluvial/residual clay.. no staining, no observed asbestos containing material.	SLM				
	2									
	2.3				Gravelly CLAY CH: high plasticity, grey, fine to coarse sized gravel, inorganic, moist, no odour , no staining, no observed asbestos containing material.	M				
	3									
	3.1				As above, but wet, no odour , no staining, no observed asbestos containing material.	W				
					TP12 refusal at 3.3m					
	4									

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Borehole Record: BH01

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Clayey SILT ML: low plasticity clay, non-plastic, light brown light brown, soft, with coarse sized gravel, dry, gravel inclusions throughout. no staining, no observed asbestos containing material.	D				
41	1									
40.96	1.6				Silty CLAY CI: medium plasticity, brown, soft, with medium sized gravel, organic, dry, timber fragments, no odour , no staining, no observed asbestos containing material.					
40	2									
39	3									
38.8	3.5				Clayey to silty GRAVEL GC: medium plasticity clay, light brown, medium dense, coarse sized, dry, with trace rootlets . no odour , no staining, no observed asbestos containing material.					
38.5	3.8		Alluvial		Clayey to silty SAND SC: medium dense, (low to medium plasticity clay), (light grey), (fine grained), moist, darker yellow @ 4.5 mbgl. no odour , no staining, no observed asbestos containing material.	M				
38	4									

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Borehole Record: BH01

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37	6		Alluvial		Clayey to silty SAND SC: medium dense, (low to medium plasticity clay), (light grey), (fine grained), moist, darker yellow @ 4.5 mbgl. no odour , no staining, no observed asbestos containing material.	M				
36	7									
35	8				**BH01 Terminated at 7.2m (Monitoring well installed.)**					
34	9									
33										

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Borehole Record: BH02

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Gravelly to clayey SILT ML: low plasticity clay, low plasticity, light brown, soft, medium to coarse sized gravel, trace fine grained sand, dry, w rootlets. increase in gravels (30%) @ 1.0mbgl. timber pieces, no odour , no staining, no observed asbestos containing material.	D				
41	1									
40.8	1.5				Silty CLAY CI-CH: medium to high plasticity, brown w iron staining, soft, with medium to coarse sized gravel, organic, slightly moist, w rootlets. no odour , no staining, no observed asbestos containing material.	SLM				
40	2									
39	3									
38.5	3.8				Gravelly SILT GM: non-plastic, light grey, very soft, fine sized gravel, dry, no staining, no observed asbestos containing material.	D				
38.3	4				Silty CLAY CI: medium plasticity, grey/brown, soft, with medium sized gravel, inorganic, slightly moist, no staining, no observed asbestos containing material.	SLM				
38	4									
37.8	4.5		Natural		Silty CLAY CI: soft, medium plasticity, light brown/yellow, organic, slightly moist, no odour , no staining, no observed asbestos containing material.					

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Borehole Record: BH02

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig** Geoprobe
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier** Stratacore
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Natural		Silty CLAY CI: soft, medium plasticity, light brown/yellow, organic, slightly moist, no odour , no staining, no observed asbestos containing material.					
36	6									
35	7				**BH02 Terminated at 6.5m (Terminated (target depth).)**					
34	8									
33	9									

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Borehole Record: BH03

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Gravelly to silty CLAY ML: non-plastic, light brown/brown, very soft, medium sized gravel, organic, dry, no odour , no staining, no observed asbestos containing material.	D				
41.5	0.8				As above, but light brown/grey, no odour , no staining, no observed asbestos containing material.					
41.3	1				Silty CLAY CI: medium plasticity, firm to stiff, organic, slightly moist, dark brown/orange. no staining, no observed asbestos containing material.	SLM				
41										
40.3	2				Silty CLAY CI-CH: medium to high plasticity, dark brown/red, soft, with fine to coarse sized gravel, organic, slightly moist, darker grey and increase moisture with depth. (slightly moist @ 4.0mbgl). no staining, no observed asbestos containing material.					
40										
	3									
39										
	4									
38										
37.8	4.5		Natural		As above, but Gravelly to silty ML: very soft, non-plastic, dark yellow grey, medium sized gravel, dry, no odour , no staining, no observed asbestos containing material.	D				

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Borehole Record: BH03

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Natural		As above, but Gravelly to silty ML: very soft, non-plastic, dark yellow grey, medium sized gravel, dry, no odour , no staining, no observed asbestos containing material.	D				
36	6									
35	7									
34	8									
33	9				**BH03 Terminated at 8.5m (Groundwater encountered @ 6.5 - 7.0mBGL.)**					

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH04

Stantec

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig** Geoprobe
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier** Stratacore
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Clayey SILT ML: low plasticity clay, low plasticity, light brown, soft, with fine to coarse sized gravel, dry, trace fabric pieces, no odour , no staining, no observed asbestos containing material.	D				
41	1									
40.3	2	2			Silty GRAVEL GM: grey, loose, fine to coarse sized, dry, no odour , no staining, no observed asbestos containing material.					
40										
39.8		2.5			Gravelly to silty CLAY CI: medium plasticity, grey/brown w red mottlings, soft, fine to coarse sized gravel, organic, moist, no odour , no staining, no observed asbestos containing material.	M				
39	3									
38.5		3.8			Silty CLAY CI-CH: medium to high plasticity, brown, soft, with fine to medium sized gravel, organic, slightly moist, no odour , no staining, no observed asbestos containing material.	SLM				
38	4	4.3			Clayey to silty SAND SC: medium to high plasticity clay, grey, medium dense, fine grained, wet, no odour , no staining, no observed asbestos containing material.	W				
37.5		4.8	Alluvial		Silty CLAY CH: firm, high plasticity, dark green/yellow, organic, wet, no odour , no staining, no observed asbestos containing material.					

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Borehole Record: BH04

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig** Geoprobe
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier** Stratacore
Job No: 305001663	**Inclination:**	**Logged/Checked:** Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Alluvial		Silty CLAY CH: firm, high plasticity, dark green/yellow, organic, wet, no odour , no staining, no observed asbestos containing material.					
36	7				**BH04 Terminated at 6m (Target depth (Natural))**					
35										
	8									
34										
	9									
33										

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Borehole Record: BH05

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Gravelly to clayey SILT ML: non-plastic, dark brown/grey, very soft, coarse sized gravel, dry, no odour , no staining, no observed asbestos containing material.	D				
41	1									
40.5	1.8				Gravelly to silty CLAY CL-CI: low to medium plasticity, grey, soft, fine to coarse sized gravel, organic, dry, w rootlets. firm @2.0mbgl - 2.2mbgl.. no odour , no staining, no observed asbestos containing material.					
40	2									
39	3									
38.5	3.8				Silty CLAY CI-CH: medium to high plasticity, dark brown, firm, with fine to coarse sized gravel, organic, moist, no odour , no staining, no observed asbestos containing material.	M				
38	4									
	4.3		Alluvial		Sandy to silty CLAY CI-CH: very soft, medium to high plasticity, brown/yellow, fine grained sand, organic, wet, no odour , no staining, no observed asbestos containing material.	W				

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Borehole Record: BH05

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Alluvial		Sandy to silty CLAY CI-CH: very soft, medium to high plasticity, brown/yellow, fine grained sand, organic, wet, no odour , no staining, no observed asbestos containing material.	W				
36	7				**BH05 Terminated at 6m (Target Depth)**					
35										
	8									
34										
	9									
33										

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Borehole Record: BH06

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample: Primary	Sample: QA	Testing: PID	Remarks
42	0		Fill		Clayey SILT ML: low plasticity clay, non-plastic to low, dark brown, soft, with medium to coarse sized gravel, trace medium grained sand, dry, no staining, no observed asbestos containing material.	D				
41	1				As above, but slightly moist, no staining, no observed asbestos containing material.	SLM				
40.8	1.3									
	1.5		Natural		Silty CLAY CL-CI: soft, low to medium plasticity, brown, trace fine to medium sized gravel, organic, slightly moist, no observed asbestos containing material.					
40	2									
39	3									
38.8	3.5				As above, but brown dark, with medium to coarse sized gravel, slightly moist to dry, no observed asbestos containing material.	SLM-D				
38	4									

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Borehole Record: BH06

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37					As above, but brown dark, with medium to coarse sized gravel, slightly moist to dry, no observed asbestos containing material.	SLM-D				
36					**BH06 Terminated at 6m (Achieved target depth.)**					
35	7									
34	8									
33	9									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH07

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Clayey SILT ML: low plasticity clay, non-plastic to low, light brown, very soft, with fine to coarse sized gravel, dry, w rootlets . no odour , no staining, no observed asbestos containing material.	D				
41.96	1.1				Silty CLAY CI: medium plasticity, light brown/brown, firm, with fine to coarse sized gravel, organic, dry, w rootlets . no odour , no staining, no observed asbestos containing material.					
40	2									
39.8	2.5				Gravelly to silty CLAY CI: medium plasticity, grey/brown, soft, fine to coarse sized gravel, trace fine grained sand, inorganic, wet to moist, moist/wet @ 2.7mbgl. with some plastic pieces, no odour , no staining, no observed asbestos containing material.	W-M				
39	3									
38	4									
37.5	4.8		Alluvial		Sandy to silty CLAY CI-CH: soft, medium to high plasticity, orange/d.orange, fine grained sand, organic, moist, no odour , no staining, no observed asbestos containing material.	M				

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Borehole Record: BH07

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig Geoprobe
Drill Supplier Stratacore
Logged/Checked: Michael Korner

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Alluvial		Sandy to silty CLAY CI-CH: soft, medium to high plasticity, orange/d.orange, fine grained sand, organic, moist, no odour , no staining, no observed asbestos containing material.	M				
36					**BH07 Terminated at 6m (Achieved target depth)**					
35	7									
34	8									
33	9									

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Borehole Record: BH09

Stantec

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 10/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample: Primary	Sample: QA	Testing: PID	Remarks
42			Fill		Clayey SILT ML: non-plastic to low, brown & light brown, soft to firm, with fine to medium sized gravel, dry, no observed asbestos containing material.	D				
41.3	1 (1)				As above, but brown grey, no observed asbestos containing material.					
41										
40.9	1.4				As above, but slightly moist, no observed asbestos containing material.	SLM				
96	1.6				As above, but wet to moist, no observed asbestos containing material.					
	2									
40						W-M				
	3									
39										
38.5	3.8									
	4		Natural		Silty CLAY CI-CH: firm, medium to high plasticity, brown, trace fine grained sand, organic, moist.	M				
38										

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Borehole Record: BH09

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 10/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Natural		Silty CLAY CI-CH: firm, medium to high plasticity, brown, trace fine grained sand, organic, moist.	M				
36					**BH09 Terminated at 6m (Achieved target depth)**					
	7									
35										
	8									
34										
	9									
33										

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Borehole Record: BH08

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 11/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample: Primary	Sample: QA	Testing: PID	Remarks
42	0		Fill		Clayey SILT ML: non-plastic to low, brown grey, soft, with medium to coarse sized gravel, trace fine grained sand, dry, no observed asbestos containing material.	D				
41.9	0.4				As above, but slightly moist to dry, no observed asbestos containing material.	SLM-D				
41	1									
40.3	2				Clayey SILT ML: low plasticity clay, non-plastic to low, grey, very soft to soft, trace fine sized gravel, dry, shale noted from 2.5 to 2.8.	D				
40	2									
39.5	2.8		Natural		Silty CLAY CI-CH: soft, medium to high plasticity, brown, trace fine sized gravel, inorganic, moist to slightly moist.	M-SLM				
39	3									
38	4									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH08

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 11/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Natural		Silty CLAY CI-CH: soft, medium to high plasticity, brown, trace fine sized gravel, inorganic, moist to slightly moist.	M-SLM				
36	7				**BH08 Terminated at 6m (Achieved target depth)**					
35	8									
34	9									
33										

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Borehole Record: BH10

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 11/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Gravelly to clayey to silty SILT ML: low to medium plasticity, brown to dark brown., soft to firm, medium to coarse sized gravel, trace fine to medium grained sand, slightly moist to dry.	SLM-D				
41.4	0.9				Silty CLAY CL-CI: low to medium plasticity, brown, soft to firm, with fine to medium sized gravel, trace fine grained sand, inorganic, slightly moist to dry.					
41	1									
40.5	1.8				As above, but dark grey brown, with medium to coarse sized gravel, organic.					
40	2									
39.4	2.7				As above, but Gravelly to clayey to silty SILT ML: brown., medium to coarse sized gravel.					
39.4	3									
39	3.2		Natural		Silty to clayey CLAY CI: firm, medium plasticity, brown, trace fine sized gravel, inorganic, slightly moist to dry.					
38	4									
					BH10 Terminated at 4.5m (Achieved target depth)					

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH11

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 11/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
42	0		Fill		Clayey SILT ML: non-plastic to low, grey light brown, soft, with medium to coarse sized gravel, dry.	D				
41	1									
40.5	1.8				Silty CLAY CL: low plasticity, brown, very soft to soft, with fine to coarse sized gravel, trace fine grained sand, organic, slightly moist.	SLM				
40	2									
39	3									
38.8	3.5				Gravelly to sandy CLAY CL-CI: low to medium plasticity, light grey to pale brown., soft, medium to coarse sized gravel, fine to medium grained sand, with medium plasticity silt, inorganic, moist to slightly moist, digger notes - gravelly at 3.5.	M-SLM				
38.3	4				Gravelly to sandy CLAY CL: low plasticity, grey brown, coarse sized gravel, medium to coarse grained sand, inorganic, wet, saturated at 4.2-4.4..	W				
38	4									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH11

Stantec

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 11/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37.3	5									
37			Natural		Silty CLAY CI-CH: soft, medium to high plasticity, brown, with medium to coarse sized gravel, trace fine to medium grained sand, inorganic, wet.					
36					**BH11 Terminated at 6m (Achieved target depth)**					
	7									
35										
	8									
34										
	9									
33										

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH12

Project: Jordan Springs HS (DSI)
Location: Jordan Springs NSW
Loc Comment:
Job No: 305001663

Position: Easting: 289,461.19
Northing: 6,266,244.75
Elevation: 42.30(m)
Inclination:

Date Drilled: 11/10/2024
Drill Rig
Drill Supplier
Logged/Checked: Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample: Primary	Sample: QA	Testing: PID	Remarks
42	0		Fill		Clayey SILT ML: non-plastic to low, grey, light brown, soft, trace fine to medium sized gravel, dry.	D				
41	1									
40.3	2				Silty CLAY CL: non-plastic to low, grey brown, very soft to soft, trace medium sized gravel, organic, slightly moist.	SLM				
40	2									
39.4	2.7				As above, but reddish brown, with fine sized gravel.					
39.4	3				Gravelly to clayey SILT ML: low plasticity clay, non-plastic to low, grey, soft, fine to medium sized gravel, dry.	D				
39	3.2									
38.4	4				As above, but Clayey medium to high plasticity clay, low to medium plasticity, grey, with medium to coarse sized gravel.					
38	4.2									
37.5	4.8		Natural		Clayey to silty CLAY CI-CH: soft to firm, medium to high plasticity, mustard-yellow brown, trace fine sized gravel, inorganic, slightly moist.	SLM				

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Borehole Record: BH12

Project: Jordan Springs HS (DSI)	**Position:** Easting: 289,461.19	**Date Drilled:** 11/10/2024
Location: Jordan Springs NSW	Northing: 6,266,244.75	**Drill Rig**
Loc Comment:	**Elevation:** 42.30(m)	**Drill Supplier**
Job No: 305001663	**Inclination:**	**Logged/Checked:** Finn Tainsh

Elevation (mAHD)	Depth (m)	Water	Soil Origin	Graphic Log	Material Description	Moisture	Sample		Testing	Remarks
							Primary	QA	PID	
37			Natural		Clayey to silty CLAY CI-CH: soft to firm, medium to high plasticity, mustard-yellow brown, trace fine sized gravel, inorganic, slightly moist.	SLM				
36					**BH12 Terminated at 6m (Achieved target depth.)**					
35	7									
34	8									
33	9									

This report must be read in conjunction with accompanying notes and abbreviations. It has been prepared for environmental purposes only, without attempt to consider geotechnical properties or the geotechnical significance of the materials encountered. As such it should not be relied upon for geotechnical purposes.

Appendix H Data Quality Assessment

The field and laboratory quality were assessed against the data quality indicators, which are provided below in **Table 16-1** and **Table 16-2**, respectively.

Table 16-1 Fieldwork DQI implementation assessment

Field Quality Indicator	Conformance	Comment
SOPs are appropriate and complied with.	Yes	Reusable equipment, where used, was decontaminated on site and rinsates collected / analysed to confirm the effectiveness of the decontamination procedure. Stantec's fieldwork activities and procedures were in conformance with Standard Operating Procedures and industry best practice.
Field duplicates and Blind field duplicates are collected and analysed at a rate of 5% (1 per 20 samples or 1 per 10 samples for PFAS).	Yes	Refer to Table 16-4.
Use of calibrated equipment.	Yes	Refer to the calibration certificates provided in **Appendix I**. All field equipment was serviceable and calibrated.
Samples <30% Relative Percentage Difference (RPD)	Partial	Refer to **Table 16-4** below. Soil and sediment: Select samples exceeded the 30% RPD value for analytes including metals. These RPD exceedances are inferred to be associated with soil heterogeneity during sampling and as a conservative measure the highest values were adopted for interpretation. Water: Select samples exceeded the 30% RPD value for analytes including metals. RPD exceedances of metals, nutrients and PFAS were calculated. These exceedances are not considered to impact the outcome of this DSI and as a conservative measure the highest values were adopted for interpretation.
Analysis of rinsate sample collected at rate of 1 per day.	Partial	Rinsate samples were obtained during the soil and groundwater monitoring event but not during surface water sampling. Stantec consider that the rinsate practices and decontamination procedures are demonstrated as effective based on the data obtained.
Trip spike and trip blanks were used.	No	Spikes and blanks were not utilised throughout the duration of the monitoring program. Since hydrocarbon contaminants were not key contaminant for the identified contaminant sources, the absence of trip spike / blank data is not considered to impact the DSI findings. Samples were collected in laboratory supplied containers, kept chilled and provided to laboratories within holding time, so data quality is considered reliable.
Appropriate media sampled.	Yes	Yes, all appropriate media was samples as per the SAQP.

Field Quality Indicator	Conformance	Comment
Preservation and storage of samples upon collection and during transport to the laboratory occurs.	Yes	-
Sampling is undertaken by an experienced sampler.	Yes	The field staff from Stantec are adequately trained and experienced for the tasks undertaken.
All critical locations sampled.	Yes	-
All samples collected from grid and targeted (stratified/judgmental).	Yes	Yes, as in submission.
Suitable records of field work are documented.	Yes	See **Appendix I**.
Completed laboratory sample chain-of-custody and documentation.	Yes	See **Appendix F**.
Same SOP is used on each field occasion.	Yes	Field activities and sampling procedures were consistent through the duration of the fieldwork program.
Climatic conditions are documented.	Yes	Climatic conditions were documented for each day of site attendance.

Table 16-2 Laboratory DQI conformance assessment

Laboratory Quality Indicator	Conformance	Comment
Laboratory analyses of laboratory and inter-laboratory duplicates, field duplicates, laboratory prepared volatile trip spikes.	Yes	See **Appendix F**.
Laboratory holds NATA-accreditation for the analyses.	Yes	See **Appendix F**.
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. Results are within acceptance limits.	Partial	Outliers summarised in **Table 16-5**.
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.	Partial	Refer to **Table 16-4** below.
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).	Yes	See **Appendix E**.
Rinsate samples used when sampling equipment is reused have analytical results <LOR.	Yes	See **Appendix E**.

All COPC are analysed.	Yes	During investigation works, no indicators were present (staining, odours and / or PID readings) that triggered the analysis of VOCs and SVOCs.
Appropriate methods and PQLs are implemented.	Partial	Some PQL above adopted criteria.
Sample documentation is complete.	Yes.	See **Appendix F**.
Samples are analysed within holding times.	Yes.	
Same laboratories are used and justification is given where differences occur.	Yes	Same primary and secondary laboratory for full program.
Same analytical methods, PQL, and units of measurement are used.	Yes	Some acceptable variation between primary and secondary laboratory.

Table 16-3 Field duplicate sample summary

Sample type	Matrix	Primary sample	Intra-lab replicate	Inter-lab replicate
Field replicates	Soil	TP01_3.5-3.6	QA100	QC100
		TP04_0-0.1	QA200	QC200
		TP07_0-0.1	QA300	QC300
		BH01_0.5	QA101	QC101
		BH05_0.5	QA102	QC102
		TP11_0-0.1	QA400	QC400
	Groundwater	MW04	QA100	QC100
	Surface water	SW02	QA100	QC100
Rinsate	Water	RIN_20241010	-	-
		RIN_20241011	-	-
		RIN_241025	-	-

With the exception of the RPD exceedances noted in **Table 16-4** all RPD results were within the acceptance criteria nominated in **Section 6**. The variation between samples is minor and in metals only and likely the result of natural heterogeneity within the soil profile and water assessed. Exceedances of RPD values are not considered to alter the outcome of this assessment and are not considered to impact the suitability of the report findings as generally, results were both below criteria. Replicate results have been considered alongside results for the purposes of assessing site suitability and risk to receptors, as a result the highest result from each sample location has been considered in all cases.

Table 16-4 RPD exceedance summary

Primary Sample	Replicate Sample	Analyte	Primary Result	Replicate Result	RPD (%)
TP01_3.5-3.6	QA100	Chromium (III+VI)	8 mg/kg	12 mg/kg	40
TP07_0-0.1	QA300	Chromium (III+VI)	21 mg/kg	15 mg/kg	33
	QC300	Chromium (III+VI)	21 mg/kg	15 mg/kg	33
BH01_0.5	QA101	Chromium (III+VI)	24 mg/kg	16 mg/kg	40
	QC101	Chromium (III+VI)	24 mg/kg	36 mg/kg	40

Primary Sample	Replicate Sample	Analyte	Primary Result	Replicate Result	RPD (%)
BH05_0.5	QA102	Lead	35 mg/kg	20 mg/kg	55
	QC102	Lead	35 mg/kg	19 mg/kg	59
	QC102 - [TRIPLICATE]	Lead	35 mg/kg	19 mg/kg	59
TP11_0-0.1	QA400	Copper	17 mg/kg	40 mg/kg	81
		Lead	12 mg/kg	18 mg/kg	40
		Nickel	9 mg/kg	19 mg/kg	71
		Zinc	39 mg/kg	87 mg/kg	76
	QC400	Copper	17 mg/kg	32 mg/kg	61
		Nickel	9 mg/kg	21 mg/kg	80
		Zinc	39 mg/kg	110 mg/kg	95
Water					
SW02	QA100	Perfluorooctane sulfonic acid (PFOS)	0.0014 µg/L	0.001 µg/L	33
		Sum of PFHxS and PFOS	0.0014 µg/L	0.001 µg/L	33
		Perfluorooctanoate (PFOA)	0.0012 µg/L	0.0007 µg/L	53
	QC100	Kjeldahl Nitrogen Total	700 µg/L	300 µg/L	80
		Nitrate (as N)	<10 µg/L	60 µg/L	143
		Nitrogen (Total)	700 µg/L	400 µg/L	55
MW04	QA100	Copper (filtered)	4 µg/L	12 µg/L	100
		Nickel (filtered)	39 µg/L	94 µg/L	83
		Zinc (filtered)	133 µg/L	208 µg/L	44
		Sum of PFAS	0.302 µg/L	0.222 µg/L	31
		6:2 Fluorotelomer Sulfonate (6:2 FtS)	0.262 µg/L	0.186 µg/L	34
	QC100	Copper (filtered)	4 µg/L	30 µg/L	153
		Nickel (filtered)	39 µg/L	79 µg/L	68
		Zinc (filtered)	133 µg/L	200 µg/L	40
		Sum of PFAS	0.302 µg/L	0.22 µg/L	31
		Sum of PFHxS and PFOS	0.0144 µg/L	<0.01 µg/L	36

H.1 Rinsates

No analyte detections were detected in all rinsate samples analysed with exception to RIN_241025 (groundwater rinsate sample) for 6:2 Fluorotelomer Sulfonate (6:2 FtS) (0.015 µg/L). Stantec consider this detection to be a result of incomplete decontamination following the groundwater monitoring event conducted. As 6:2 FtS was detected at higher concentration in all sample monitoring wells (with exception to MW05), Stantec do not consider this detection to alter the outcomes of this assessment.

H.2 Groundwater field parameters

Stabilised groundwater quality parameters recorded during a sampling event on 25 October 2024 are summarised in **Table *9-4*** above. Field records and calibration certificates are presented in **Appendix I**.

H.3 Laboratory QA/QC

In accordance with Stantec's Quality Assurance and Quality Control (QA/QC) procedures and AS4482.1 (2005), samples were stored in insulated transport containers containing ice and delivered to the designated laboratories under Chain of Custody documentation following sample collection. Chain of Custody records are included in **Appendix F**.

ALS and Envirolab, the chosen analytical laboratories are NATA-accredited and undertook internal QA/QC procedures which include the analysis of method blanks, internal duplicate samples, laboratory control samples, matrix spikes and surrogate recovery. Additionally, laboratory QA/QC procedures include sample receipt, logging, storage, preservation and analysis within the method specified holding time.

A review of the laboratory QA/QC procedures indicated that, with the exception of the outliers noted in **Table 16-5**, laboratory QA/QC were recorded within acceptance criteria, samples were received and stored appropriately, and all samples were analysed within the specified holding time.

Table 16-5 Laboratory QA/QC outliers summary

Laboratory	Report ID	Analyte	Laboratory Sample ID	QA/QC Outlier	Notes
ALS	ES2432838	EPN	EM2417230--001	Matrix spike	Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
		Monocrotophos			
		Parathion			
		Parathion-methyl			
		Fosetyl Aluminum			
		Naftalofos			
		Thiometon			
		Bromophos-ethyl			
		Nitrite as N	ES2432838-001	Holding time	Sample Received out of holding time for analysis. Review of laboratory results as compared to like samples indicates the minor exceedance of holding times to not have impacted the representativeness and useability of data.
		Reactive Phosphorus as P			
Eurofins	1147782-W	Fluoranthene	B24-Oc0031577	Laboratory duplicate	Laboratory states 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.
		Phenanthrene			
		Pyrene			
		Total Recoverable Hydrocarbons (TRH)	S24-Oc0025472	Holding time	Samples were received by lab 18/10/2024, 10 days after the sampling date. Review of laboratory results as compared to like samples indicates the minor exceedance of holding times to not have impacted the representativeness and useability of data.
		Polycyclic Aromatic Hydrocarbons (Trace level)			
		Organophosphorus Pesticides (Trace level)			
		Polychlorinated Biphenyls (PCB trace level)			
		Organochlorine Pesticides (Trace level)			
		Nitrite (as N)			
Eurofins	1147782-S	Arsenic	S24-Oc0047878	Laboratory duplicate	Laboratory states the RPD reported passes Eurofins Environment Testing's QC -

		Chromium			Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.
Eurofins	1147899-W	Copper	S24-Oc0026703	Laboratory duplicate	Laboratory states 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.
		Lead			
Envirolab	364369	Chromium	364369-1	Laboratory duplicate	Laboratory states the RPD was out of acceptance criteria, the sample was run in triplicate as 364369-2 and obtained acceptable recovery
Envirolab	364116	Chromium	364116-1	Laboratory duplicate	Laboratory states the RPD was out of acceptance criteria, the sample was run in triplicate as 364369-3 and obtained acceptable recovery
ALS	ES2433215	Nickel	ES2432388--042	Matrix spike	Poor matrix spike recovery for particular compounds due to matrix interferences
ALS	ES2434893	Sulphate (SO_4^{2-})	ES2434645--006	Matrix spike	spike recovery not determined, background level greater than or equal to 4x spike level
		Parathion-methyl	ES2434972--001	Matrix spike	Poor matrix spike recovery for particular compounds due to matrix interferences and high matrix spike recovery has been noted for particular compounds due to ion enhancement.
		Prothiofos			
		Trichlorfon			
		Fosetyl Aluminum			

H.4 Data useability

The data validation procedure employed in the assessment of the field and laboratory QA/QC data and shown above has indicated that the reported analytical results are representative of the conditions at the sample locations and that the analytical data can be relied upon for the purpose of these works. It is concluded that overall, the quality of the analytical data produced is acceptable and reliable for the intended purpose.

Stantec

Stantec is a global leader in sustainable architecture, engineering, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

