Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

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SLR Project No.: 623.030475.00005

4 April 2025

Revision: 2

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
V1.0	26 March 2025	Prakash Hewavitharana	Mike Haynes	John Irving
V2.0	4 April 2025	Prakash Hewavitharana	Mike Haynes	John Irving

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Townsville City Council (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

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Acronyms and abbreviations

ANCE	Acid neutralising capacity equivalent
ASS	Acid sulfate soils
ASSMP	Acid sulfate soils management plan
BTEXN	Benzene, toluene, ethylbenzene, xylene, naphthalene
COC	Chain of custody
CoPC	Contaminants of potential concern
CRS	Chromium reducible sulfur
DQO	Data quality objectives
GPS	Global positioning system
LAT	Lowest astronomical tide
LOR	Limit of reporting
NATA	National Association of Testing Authorities
OCP	Organochlorine pesticide
OPP	Organophosphorus pesticide
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PSD	Particle size distribution
PVC	Polyvinylchloride
QA/QC	Quality assurance and quality control
RIS	Reduced inorganic sulfur
RPD	Relative percentage differences
SAP	Sampling and analysis plan
SMEC	SMEC Australia Pty Limited
SLR	SLR Consulting Australia Pty Ltd
TBT	Tributyltin
TCC	Townsville City Council
TRH	Total recoverable hydrocarbon

1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) were engaged by Townsville City Council (TCC) to undertake an updated contaminated land and acid sulfate soil (ASS) investigation for proposed sediment to be dredged. The sampling was undertaken within the dredging maintenance area (the 'Site)' within Nelly Bay, Magnetic Island, Townsville, Queensland (QLD). The location of the Site is presented in Figure 5-1 (Section 5.1).

It is understood, through discussions with TCC and review of previous sediment sampling conducted by SMEC (2022), that the investigation is required to facilitate future dredging maintenance at the Site. It is estimated that a volume of approximately 7,000 m³ requires characterisation for future management with respect to contamination and ASS conditions of the sediment.

This sediment investigation report provides an assessment of works completed and a summary of the potential contaminants present within the sediment at the Site. The findings of the investigation will inform the potential for land-based re-use and/or off-shore ocean disposal.

1.1 Objectives

The objectives of the investigation were to:

- Undertake a preliminary assessment of sediment within the Site in accordance with the Sampling and Analysis Plan (SAP) (SLR 2025) and in accordance with relevant standards and guidelines (refer Section 1.2)
- Analyse the sediment within the Site to an approximate depth of -2.566 metres (m) lowest astronomical tide (LAT) as per the harbour design depth for a range of physical and chemical parameters, and compare against applicable guideline criteria
- Assess the adequacy and completeness of all information gathered
- Provide conclusions and recommendations based on the findings of this assessment for potential land-based re-use and/or offshore ocean disposal.

1.2 Guidelines and legislation

This investigation has been prepared in general accordance with the following guidelines and legislation:

- Decision tree and explanatory note for the assessment of tributyltin (TBT) in dredge spoil, Department of Agriculture, Water and the Environment, 2021).
- *Department of the Environment, Water, Heritage and Arts, National Assessment Guidelines for Dredging 2009* (NAGD, 2009).
- *Department of Resources and Department of Environment, Science and Innovation, Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines v5.1* (2024) (DoR and DESI, 2014) (QASSTM).
- *National Environment Protection Council, National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) December 1999 (2013 Amendment)* (ASC NEPM).
- *National Acid Sulfate Soils Guideline: Guidelines for the dredging of acid sulfate soil sediments and associated dredge spoil management* (NASSG) (Commonwealth of Australia, 2018).
- *PFAS National Environmental Management Plan (PFAS NEMP) (V3.0)* (Heads of EPA Australia and New Zealand 2025).
- *Water Quality Australia, National Acid Sulfate Soils Guidance, Guidelines for the Dredging of Acid Sulfate Soils and Sediments and Associated Dredge Spoil Management*, June 2018 (WQA 2018).

1.3 Scope of works

An SAP (SLR 2025a) was developed to guide the preliminary sediment investigation as per NAGD (2009). The scope of works undertaken for this investigation included:

- Review of previous sediment investigations completed within the Site (refer Section 3.0)
- Review of the existing environmental setting for the Site, including climate, topography and elevation, sediment and geology
- Collection of sediment samples from 6 sample locations to characterise dredged sediment for potential contamination
- Sediment sample analysis for contaminants of potential concern (CoPC) by a National Association of Testing Authorities (NATA) Accredited Laboratory with appropriate rates of quality control (QC) and quality assurance (QA) samples collected
- Provide conclusions and recommendations based on the findings of the investigation to inform potential land-based re-use and/or offshore ocean disposal of proposed dredged material at the Site.

The SAP (SLR 2025) proposed sediment sampling at 6 locations within the Site, however the vibracore encountered refusal at several locations in proximity to SED01 which prevented sediment sampling. Further details on the implications of the deviation from the proposed scope of works is provided in Section 5.2.

2.0 Site setting

2.1 Site details

The Site details are described as per Table 2-1.

Table 2-1 Site details

Detail	Comment
Address	Nelly Bay Harbour, Magnetic Island, QLD
Area	TCC controlled portions of Nelly Bay which require dredging maintenance consist of seven Lots occupying a total area of 61,078 m^2. The depths of maintenance dredging within the Site will be informed by a hydrographic survey.
Lot details	Lot 101 SP139222, Lot 700 SP229753, Lot 701 SP159770, Lot 702 SP159770, Lot 703 SP229753, Lot 704 SP159770, Lot 705 SP229753
Owner	Townsville City Council
Current land use	Harbour for commercial and personal boats, with boat ramp access
Surrounding land use	North: Commercial and residential land use (hotels, restaurants and shops) and Magnetic Island National Park South: Magnetic Island heli-pad, Magnetic Island Reef and Great Barrier Reef East: Nelly Bay Ferry Terminal, commercial and residential land use (hotels, supermarket and shops). West: Nelly Bay Playground, commercial and residential land use (shops and hotels).

2.2 Existing environment

Summary of surrounding environmental settings in detailed in Table 2-2.

Table 2-2 Existing environment

Site aspects	Details
Climate	A review of climate data for the period 1940 to 2025 from the Townsville Aero (032040) weather station, approximately 13 km west of the Site, identified the following (BoM, 2025): • Mean annual maximum temperature is 29°C. • Mean annual minimum temperature is 19.9°C. • Mean annual rainfall is 1,133.9 mm.
Topography and elevation	The Site elevation varies between approximately 0.0 m LAT and 4.2 m LAT based on a review of hydrographic data provided by TCC. The design depth in Nelly Bay Harbour is -2.566 m LAT with a permitted over-dredge allowance of -0.5 m making the maximum allowable dredge depth -3.066 m LAT (SMEC, 2022).
Sediment	Sediment investigations completed by SMEC (2022) identified the sediment within the Site as generally clay with some sand and gravel.

Site aspects	Details
	SMEC (2022) visually identified monosulfidic black ooze (MBO) along the banks of the Site and indicated the presence of ASS at NB03 in the area of Gustav Creek (refer Appendix A). MBOs were not observed during the SLR 2025 assessment, however, they may still be present within the Site.
Geology	A review of the Burdekin River regional surface geology identified the Site is underlain by the Quaternary Qa-QLD geological unit and generally comprised of clay, silt, sand and gravel on flood-plains of alluvium (Queensland Globe, 2025).

3.0 Previous investigations

3.1 Canal maintenance dredging Nelly Bay Harbour, Magnetic Island Environmental Management Plan (PDM, 2019)

A total of 6 sediment samples were collected and analysed for ASS, benzene, toluene, ethylbenzene, xylene, and naphthalene (BTEXN), total recoverable hydrocarbons (TRH), heavy metals, and Tributyltin (TBT) to assess the contamination levels in sediment within the Nelly Bay Harbour (the Site).

No exceedances of adopted assessment criteria were reported in the PDM report (2019) for heavy metals, BTEXN, TBT or TRH. All sediment samples had net acidity levels of less than 0.02 %S, except for two samples from the marina canal entrance and Gustav canal south, which recorded net acidity values of 0.05 %S.

Net acidity levels detected during the PDM (2019) investigation exceed the current NASSG (2018) action criteria of 0.03 %S.

It should be noted SLR did not have access to the PDM (2019) investigation report and the summary of findings presented is cited from the SMEC assessment (2022).

3.2 Nelly Bay harbour maintenance dredging campaign – Sediment investigation report (SMEC, 2022)

SMEC (2022) were engaged by TCC to prepare a sediment investigation report for the Nelly Bay Harbour Maintenance Dredging Campaign.

SMEC (2022) targeted 6 sediment sampling locations within Nelly Bay Harbour (the Site) and scheduled 10 sediment samples for laboratory analysis of ASS, BTEXN, TRH, polycyclic aromatic hydrocarbons (PAH), Organochlorine pesticide (OCP), Organophosphorus pesticide (OPP), polychlorinated biphenyls (PCB), organotin and PFAS.

All samples analysed for BTEXN, TRH, PAH, OCP/OPP, PCB, organotins, heavy metals and PFAS reported concentrations below the adopted assessment criteria. Hydrocarbons and heavy metals were however detected in samples above the laboratory limit of reporting (LOR). PFAS was not detected above the laboratory LOR.

Laboratory analysis of sediment samples via field pH testing and chromium reducible sulfur (CRS) indicated a single sample (NBH03) near the top of Gustav Creek at an approximate depth of 1.0 m bgl exceeded the NASSG (2018) action criteria, indicating potential ASS.

SMEC (2022) concluded, under NAGD (2009) the sediment to be dredged totalling approximately 7,000 m^3 is suitable for unconfined offshore disposal. Furthermore, based on application of ASC NEMP guidelines, the sediment is indicated as suitable for land-based use or disposal as general waste. It was also recommended that dredging near NBH03 consider ASS management, potentially requiring an ASS Management Plan, and that a high-level ASS Management Plan framework be submitted to the relevant authority to support the Dredge Management Plan.

Sampling locations from SMEC (2022) are presented in Figure 5.1 and a summary of analytical results are presented in Appendix A.

4.0 Data quality objectives and indicators

4.1 Data quality objectives

Data quality objectives (DQOs) are qualitative and quantitative statements derived from the outputs of the first six steps of the seven steps DQO process that:

- Clarify the study objective.
- Define the most appropriate type of data to collect.
- Determine the most appropriate conditions from which to collect data.
- Specify tolerable limits on decision errors which will be used as the basis for establishing the quantity and quality of data needed to support the decision.

The DQOs for this investigation have been prepared in line with the DQO process outlined in ASC NEPM (Schedule B2) and PFAS NEMP (2020) and are presented in in Table 4-1.

Table 4-1 Data quality objectives

Process	Response
Step 1: State the Problem	Approximately 7,000 m^3 of sediment is required to be dredged for maintenance of the Site and requires characterisation for contaminated land and ASS conditions to inform land-based re-use and/or off-shore ocean disposal.
Step 2: Identify the Decision	The principal decisions of this investigation include: • Do the contaminants in sediment present an unacceptable risk to human health or the environment during the dredging and disposal phases? • Is the nature and extent of contamination (if identified) suitably understood? • Is the adequacy and completeness of the information gathered and the density of the investigation locations adequate to meet the objectives of the investigation.

Process	Response
Step 3: Identify the Inputs to the Decision	The inputs required to investigate the decision are: • Site history and review of provided previous report (SMEC, 2022) • Relevant background data obtained during previous investigations • Field methods, such as sampling, sample storage and preservation, laboratory methods, QA/QC • Media to be sampled, location of sampling and target area • CoPC • Adopted assessment criteria • Field data and results from the laboratory analysis.
Step 4: Define the Boundaries of the Study	The vertical boundary of the Site will generally extend to the top 1.0 m of the sediment bed. The spatial boundary of the Site is presented in Figure 5-1 (Section 5.1).
Step 5: Develop a Decision Rule	The investigation will be completed through comparison of concentrations against screening level guidelines specified in NAGD (2009), NASSG (2018), ASC NEPM and PFAS NEMP V3.0 (2025).
Step 6: Specify Tolerable Limits on Decision Errors	Acceptance limits on field and laboratory data collected for this investigation will be in accordance with NAGD (2009), NASSG (2018), ASC NEPM and PFAS NEMP V3.0 (2025).
Step 7: Optimise the Design for Obtaining Data	Sampling strategy was developed in general accordance with relevant guidelines specified in Section 1.2 and the SLR SAP (2025). Samples are to be analysed by a National Association of Testing Authorities (NATA) Accredited Laboratory within approved sample holding times.

4.2 Data quality indicators

The data quality indicators (DQIs) for the assessment are presented **in** Table 4-2.

Table 4-2 Data quality indicators

DQI	Field	Laboratory	Acceptability limits
Completeness	• Sediment identified to be potentially impacted by contamination pose a potential risk to human health and the environment • Appropriate sampling procedures to be used as per guidelines in Section 1.2 • Experienced field team to undertake the investigation • Correct documentation to be completed (e.g. chain of custodies)	• All required samples analysed in accordance with the SAP, where practicable • Appropriate methods employed in accordance with NAGD (2009), ASC NEPM, NASSG (2018) and PFAS NEMP (2020) • Appropriate LORs • Sample documentation correct (e.g. chain of custodies, sample receipt notification etc) • Sample holding times in compliance	As per ASC NEPM and PFAS NEMP V3.0 (2025).
Comparability	• Correct sample procedures used at each location • Experienced field team, led by the suitably qualified person • Same type (medium, volume and sampling technique) of samples collected in accordance with laboratory requirements	• Same analytical methods used • Appropriate LORs • Samples submitted to the same NATA accredited laboratory • Analytical data is presented in the same unit	As per ASC NEPM and PFAS NEMP V3.0 (2025).

DQI	Field	Laboratory	Acceptability limits
Representativeness	• Appropriate sediment sampled as described in Section 5.0 • Samples collected must be homogenous and appropriately collected, handled, stored and preserved to reflect the field conditions	• All required samples analysed in accordance with the SAP (SLR 2025)	As per ASC NEPM and PFAS NEMP V3.0 (2025).
Precision	• Appropriate sample procedure used at each location • Collection of appropriate quality assurance and quality control (QA/QC) samples, as per ASC NEMP and PFAS NEMP V3.0 (2025).	• Analysis of: • Field duplicate samples (1 per 20 or 1 per 10 samples collected) • Trip blanks • Laboratory duplicate samples	Relative percent deviation (RPD) of 30-50%. • RPDs may exceed this range where: • Results are <10x the LOR, or • Results are <20x the LOR and the RPD is <50%
Accuracy	• Sampling procedures appropriate and complied with • Collection of appropriate QA/QC samples	• Analysis of: • Trip/field blanks • Method blanks • Laboratory surrogate spikes • Laboratory control samples • Reference material • Matrix spikes • Matrix spike duplicates • Surrogate spikes	Acceptance limit between 50 to 150% for percent recovery of laboratory control samples, matrix spikes and surrogate spikes. All others have an acceptance limit of non-detect

5.0 Field investigation program

5.1 Sampling methodology

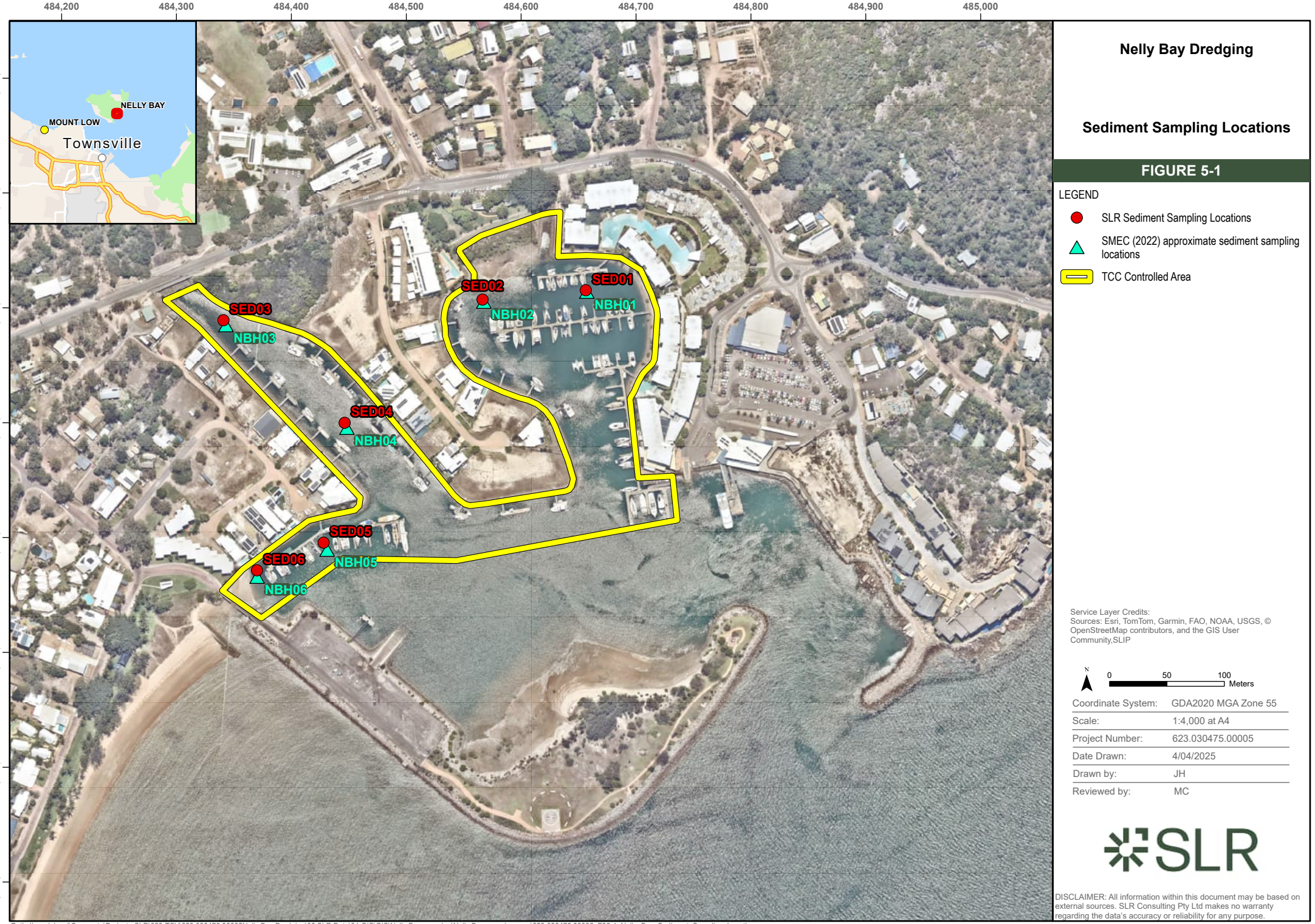
The sampling methodology undertake for the sediment sampling investigation is presented in Table 5-1.

Table 5-1 Sediment sampling methodology

Activity	Details
Sediment sampling density	A total of 12 primary sediment samples, from the 5 completed sample locations, were collected within the Site to characterise approximately 7,000 m^3 of dredged sediment. Sediment samples were collected at intervals of 0.5 m within the top 0.5 m of the sediment bed and at 1.0 m intervals thereafter until the target depth of 2.56m LAT or refusal
Sediment sampling methodology	Sediment samples were collected in-situ using a vessel mounted vibracore. Core samples were sufficiently homogenised in a stainless steel bowl, prior to collection into laboratory supplied containers using either a small trowel or new nitrile gloved hand. All sediment cores were logged, with the depth from water surface to top of sediment recorded.
Sample logging	Approximate sample locations were recorded with a handheld Global Positioning System (GPS) unit, and sediment photographs taken.
Quality control	Two quality control intra laboratory field duplicates and two inter laboratory field duplicates were collected for PFAS. One quality control intra laboratory field duplicate and one inter laboratory field duplicate sample was be collected for all other CoPC. One quality control intra laboratory field duplicate sample was collected for ASS. A single trip blank was collected at a rate of one per batch of primary samples.

Laboratory analysis	Primary samples were submitted Eurofins (primary laboratory) and ALS Environmental (secondary laboratory) under chain of custody for analysis of the following CoPC:
	• ASS
	  ○ $pH_{(F)}$ and $pH_{(FOX)}$
	  ○ CRS (3 primary samples only)

Activity	Details
	• Metals/metalloids (Sb, As, Cd, Cr, Cu, Pb, Hg, Ni, Ag, Zn) • PAH • PCB • PFAS • TBT • OCP/OPP • Moisture content • Total organic carbon • Particle size distribution (PSD).



Nelly Bay Dredging

Sediment Sampling Locations

FIGURE 5-1

LEGEND

- SLR Sediment Sampling Locations
- SMEC (2022) approximate sediment sampling locations
- TCC Controlled Area

Service Layer Credits:
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community,SLIP

N

0 50 100 Meters

Coordinate System:	GDA2020 MGA Zone 55
Scale:	1:4,000 at A4
Project Number:	623.030475.00005
Date Drawn:	4/04/2025
Drawn by:	JH
Reviewed by:	MC

SLR

Path: \\au.slr.local\Corporate\Projects-SLR\623-TSV\623.030475.00002Nelly Bay Dredging\06 SLR Data\01 GIS\GIS\Nelly Bay mapping\Nelly Bay mapping.aprx\623.030475.00005_F05-1_Nelly_Bay_Sediment_Sampling_Locations

5.2 Deviation from the SAP

The SAP (SLR 2025) proposed sediment sampling at 6 locations within the Site to characterise approximately 7,000 m^3 of sediment proposed for dredging. During the sediment investigation, the vibracore encountered refusal at several locations in proximity to SED01 which prevented sediment sampling.

The sediment surface conditions at SED01 were observed as compacted gravel material with immediate resistance to vibracoring. As a result, only 5 sediment sampling locations included sediment sampling for laboratory analysis.

Previous sediment sampling completed by SMEC (2022) in proximity to SED01 also encountered refusal 0.45 m below the sediment bed. The SMEC (2022) report findings in proximity to SED01 was reviewed to understand if this area within the harbour may present a historical contamination risk. No exceedances of the adopted assessment criteria were identified.

Refusal was also encountered at SED02 on stiff clays at approximately 0.5 m below the sediment bed which prevented collection of a sample at 1.0 m below the sediment bed. This sample was however surplus to requirements due to the depth of sediment samples required at SED02 to reach target depth (refer Section 6.1). Furthermore, the contaminant concentrations at SED02 within the top 0.5 m of sediment did not indicate potential for contamination within deeper layers of sediment.

5.3 Quality assurance and quality control

The following QA/QC procedures was implemented for sediment sampling:

- Prior to drilling and between sampling locations, the stainless steel vibracore coring tube was washed and clumped sediment brushed off.
- Polyvinylchloride (PVC) pipe holding trays and mixing containers (used in the aid of logging and obtaining samples) were washed with a triple rinse procedure:
    - Scrub off excess dirt in first cleaning container using a plastic brush
    - Rinse thoroughly in tap water
    - Triple rinse in distilled or deionised water (Grade 3 or Millipore water)
    - Any oily sheens present on equipment used Liquinox to remove all potential hydrocarbons and the above decontamination procedure repeated.
- A fresh set of nitrile gloves were worn for the collection of each new sample.
- All sampling containers were packed immediately into a chilled eskies following sample collection.

5.4 Laboratory analysis

5.4.1 Adopted assessment criteria

The proposed use for the dredged sediment material is use as beach nourishment material and top fill (land-based reuse) when required by TCC on Magnetic Island (SMEC 2022). The adopted assessment criteria have also considered potential for dredged sediment for offshore ocean disposal, if required.

Where sediment criteria are not available to facilitate land-based re-use, as beach nourishment, soil criteria for recreation land use has been adopted as a conservative comparison.

- NAGD (2009):
    - Interim sediment quality guidelines.
    - Sediment quality high value guidelines.
- ASC NEPM (2013):
    - Health-based investigation levels (HIL) for recreational land use (soil).
    - Health Screening Levels (HSL) recreational land use (sand).
    - Generic ecological investigation levels (EIL) for areas of ecological significance.
    - Ecological screening levels (ESL) for areas of ecological significance (coarse soil).
- PFAS NEPM (2025):
    - HIL for public open space.
    - EIL for direct and indirect exposure for all land uses.
- NASSG (2018) action criteria:
    - ASS - Net acidity > 1,000 tonnes of material disturbed (clayey sand to light clays).

6.0 Investigation findings

6.1 Sampling observations

Sediment sampling was undertaken by an experienced SLR environmental scientist under the guidance of a Suitably Qualified Person (SQP) under the EP Act. Sediment samples were collected using a vibracoring rig and operated by a licenced contractor, Rhino Dive.

A summary of the sediment samples collected at each location, target depth and sediment observations are presented in Table 6-1. Sediment logs are presented in Appendix B and a photolog of the sediment cores are presented in Appendix C.

Table 6-1 Sediment sample observations

Location	Hydrographic depth (m LAT)	Target depth (m LAT)	Required depth into sediment (m below sediment bed)	Samples analysed sample from (m below sediment bed)	Sediment observations
SED01	2.7	2.56	0.14	Nil	Compacted gravel material encountered. Refusal with vibracore.
SED02	2.6	2.56	0.04	0.5	Black very stiff sandy clay. Refusal at 0.5 m below sediment bed to the stiff clays.
SED03	0.6	2.56	1.96	0.5,1.0,2.0	Brown fine to coarse loose sand. Sand becoming more compact with increasing depth. Mild organic odour observed at 2.0 m.
SED04	2.2	2.56	0.36	0.5,1.0	Black very stiff sandy clay. Mild organic odour present from 0.5 m to 1.0 m.
SED05	2.0	2.56	0.56	0.5,1.0	Black very stiff sandy clay. Strong organic odour present at 0.5 m. Refusal at 0.5 m below sediment bed on stiff clays.

Location	Hydrographic depth (m LAT)	Target depth (m LAT)	Required depth into sediment (m below sediment bed)	Samples analysed sample from (m below sediment bed)	Sediment observations
SED06	0.2	2.56	2.36	0.5,1.0,2.0,3.0	Black fine grained sandy clay with some rounded medium gravel present. Strong sulphur odour present from 0.5 m to 3.0 m.

6.2 Analytical findings

6.2.1 ASS pH field screen analysis

The ASS screening test was used to indicate the likelihood of a sediment sample containing actual acidity and/or potential acidity. The laboratory results of the pH field screening test are provided in Appendix D.

Initial screening by analysis of pH_F and pH_{FOX} adopted the following indicators for the potential presence of actual ASS (AASS):

- A pH_F value of 4 or less

The initial screen adopted the following indicators for the presence of potential ASS (PASS):

- Where pH_F results are not indicative of AASS, a pH_{FOX} value of 3 or less
- A ΔpH greater than 2 (from pH_F to pH_{FOX})
- To a much lesser extent, a 'vigorous' observed reaction rate. The presence of organic matter, such as in mangrove/estuarine muds and marine clays, may also cause a vigorous reaction, which is not attributed to sulfidic material.

The laboratory completed field pH tests were carried out on 12 sediment samples (including one intra-laboratory sample). The results of the field pH testing are summarised as follows:

- The pH_F values for all sediment samples ranged from pH 8.1 to pH 8.9. As such, it is unlikely that any samples contain AASS
- The results of the pH_{FOX} tests for all samples ranged from pH 3.4 to pH 7.8. There were only two samples (SED03_0.5 & SED03_2.0) from SED03 that measured pH_{FOX} below 3 to 4, indicating PASS may be present in the sediment at SED03 from a variety of depths, however further laboratory analysis via CRS is required to confirm presence
- A decrease in two or more pH units was identified in four of the samples (SED03_0.5, SED03_1.0, SED03_2.0, SED04_0.5), including all samples from SED03, which may indicate the presence of PASS in sediment at SED03.

Marine muds commonly have a pH > 7 which reflects the influence of seawater (pH 8.2). Oxidation of sediment samples with hydrogen peroxide may assist in indicating if the materials contain reduced inorganic sulfur (RIS).

6.2.2 Chromium reducible sulfur analysis

Following the ASS field screen test, 3 sediment samples (SED03_0.5, SED03_2.0, SED04_0.5) were scheduled for chromium reducible sulfur (CRS) analysis to confirm and understand the potential net acidity in the sediment sampled at the Site (refer Appendix D).

The NASSG (2018) provides an action criterion of 18 mol H+/tonne (or 0.03 % sulfur) for net acidity when excavation works disturb material greater than 1,000 tonnes.

Actual acidity was not identified in any of the three (3) samples analysed, however, potential acidity, was detected in all three samples and ranged from 31 mol H+/tonne to 290 mol H+/tonne (SED04_0.5). Retained acidity was not identified in any samples however extractable sulfur was identified in all three samples.

The CRS results indicate all soil samples analysed exceed the 18 mol H+/tonne action criterion for net acidity. The net acidity of the sediment from SED03 and SED04 ranged between 31 mol H+/tonne and 290 mol H+/tonne (SED04_0.5). The analytical findings from the ASS CRS analysis indicate PASS is present within the sediment at SED03 and SED04.

Liming rates were derived for each sample to identify the approximate quantity of lime required to neutralise a dry sediment material and ranged between 2.3 kg CaCO3/t to 22 kg CaCO3/t.

Excess acid neutralising capacity equivalent (ANCE) was identified in all three sediment samples and ranged from 0.26 % CaCO3 to 22 % CaCO3.

Previous sediment sampling completed at the Site by SMEC (2022) included ASS CRS analysis of two sediment samples from NBH03, near the top of Gustav Creek and in the approximate same location as SLR sample SED03 (refer Figure 5.1). PASS was identified in the sample collected from 1.0 m bgl.

The PASS findings by SMEC (2022) near the top of Gustav Creek correlate with the findings of this investigation with SED03 and SED04 ASS CRS analysis indicating the presence of PASS. In accordance with the NASSG (2018), net acidity of any ASS material equal to or exceeding the action criterion will require a detailed ASS Management Plan prior to disturbance and will apply to sediment proposed for dredging in the areas of SED03 and SED04.

6.2.3 Contamination findings

A total of 18 sediment samples, including 3 pairs of intra- and inter-laboratory field duplicate samples, were collected and scheduled for laboratory analysis. The CoPC are summarised in **Table 5-1**, with analytical results screened against the adopted NAGD (2009), ASC NEPM and PFAS NEMP (2025) assessment criteria in Section 5.4.1.

No sediment samples exceeded the adopted assessment criteria. PAH, PCB, PFAS, TBT and OCP/OPP were not detected above the laboratory LOR. A summary of CoPC detected above the laboratory LOR are presented in Table 6-2. A summary of analytical findings is presented in Appendix D. Laboratory certificates are presented in Appendix F.

Table 6-2 Summary of analytical results above the laboratory LOR

CoPC	Number of samples analysed	Number of samples above LOR	Minimum concentration (mg/kg)	Maximum concentration (mg/kg)
Metals/metalloids				
Arsenic	13	10	2	7.7
Chromium (III & VI)	13	11	<5	28
Copper	13	11	<5	26
Lead	13	11	<5	15
Nickel	13	8	<5	15
Zinc	13	13	5.9	46
BTEXN				
Benzene	13	3	0.1	0.1
TRH				
TRH C16-C34 (F3)	13	1	<100	240
TRH C34-C40 (F4)	13	1	<100	150
TRH C10-C40 (Total)	13	1	<100	390

7.0 Quality assurance and quality control

7.1 Summary

Quality assurance and quality control (QA/QC) procedures relevant to this investigation were carried out in general accordance with the relevant ASC NEPM Schedule B (2) Guideline on Data Collection, Sample Design and Reporting – Section 4 and Schedule B (3) Guideline on Laboratory Analysis of Potentially Contaminated Sites and SLR's Standard Operating Procedures for Contaminated Site Investigation.

Adequate QA has been achieved by meeting the following DQOs:

- Maintenance of sample integrity (sampling and analytical equipment decontamination, minimisation of cross contamination of samples, cross checking of sample identities, duplicate sampling and analytical data evaluation)
- Method accuracy (field and laboratory procedures)
- Data precision (laboratory instrumentation checks and record review, laboratory quality control analysis)
- To ensure that the results of the investigation were valid and defensible, work was carried out according to industry-accepted standards by experienced environmental scientists and in accordance with ASC NEPM.

The laboratory selected for carrying out the laboratory analysis, Eurofins (primary and intra-laboratory duplicate sample analysis) and ALS (inter-laboratory duplicate sample analysis) are accredited and certified by NATA to carry out each analysis. Internal laboratory QC procedures include duplicate sample analysis and an assessment of laboratory holding times.

Laboratory results of QA/QC testing show that the laboratory data is representative of conditions at sample locations and therefore can be relied upon for the purpose of this investigation.

7.2 Data validation summary

As part of the data validation, laboratory results, CoC documentation, and field QA/QCs were assessed (refer Appendix E). The following observations were made as an overall summary of the quality of the analytical component for this project:

- No primary samples exceeded holding times. Inter-laboratory field duplicate samples however breached the recommended extraction/analysis holding time. This is not considered a non-compliance as the standard holding times for the analytes (PFAS & metals) is 6 months and the samples were kept in a laboratory freezer.
- Sample integrity and container requirements were documented as acceptable for all samples.
- Matrix spike duplicate recovery % R values indicated that sample accuracy was acceptable for most samples and the majority of discrepancies related to samples that were not part of the relevant work orders.
- Laboratory surrogate recovery % R values and laboratory control spike recovery % R values were acceptable for all primary samples indicating that laboratory accuracy was acceptable

- Laboratory duplicate RPD (% RPD) results indicated that sample precision was acceptable for the majority of analytes
- All laboratory QA/QC method blanks were reported to have analytical concentrations below the laboratory detection limits and thus found to be acceptable
- Based on the RPDs and the QA/QC report, the analytical results are considered representative of the concentration of the parameters within the sample media. It is therefore considered that the QA procedures implemented were acceptable in minimising cross contamination during sampling and transportation to the analytical laboratory.

The quality of the analytical component for this project is considered acceptable.

8.0 Conclusion and recommendations

A preliminary assessment of sediment within the Site was undertaken to inform potential for land-based re-use and/or offshore ocean disposal in accordance with the SAP (SLR, 2025).

The investigation included a desktop assessment and analysis of sediment within the Site to an approximate depth of -2.566 m LAT, as per the harbour design depth, for a range of physical and chemical parameters.

Based on the findings of the investigation, the following conclusions were made:

- A total of 5 sediment sampling locations, from a proposed 6 locations, were completed within the Site to characterise approximately 7,000 m^3 of sediment proposed for dredging. The sixth sample location (proposed SED01) was not able to be completed due to refusal on compacted gravel. SMEC (2022) also encountered refusal during their investigation in close proximity to SED01, however were able to collect a sample 0.45 m below the sediment bed. No exceedances of the adopted assessment criteria were identified
- A total of 18 sediment samples were scheduled for laboratory analysis for CoPC, including ASS. No sediment samples exceeded the adopted NAGD (2009), ASC NEPM and PFAS NEMP (2025) assessment criteria. PAH, PCB, PFAS, TBT and OCP/OPP were not detected above the laboratory LOR.
- An ASS field screen of the sediment indicated a potential for PASS to be present in sediment at SED03 and SED04. Further ASS analysis through CRS testing was undertaken on SED03_0.5, SED03_2.0 and SED04_0.5 to confirm presence of PASS and understand potential net acidity at SED03 and SED04 to inform potential management measures.
- ASS CRS analysis indicated the presence of PASS at SED03 and SED04 following exceedance of the NASSG (2018) action criterion.
- SMEC (2022) location NBH03, which was collected in close proximity to SLR sample SED03 near the top of Gustav Creek, also indicated oxidation to acidic conditions following ASS field screen and the presence of PASS. SMEC (2022) sample NBH04 was not analysed for ASS CRS due to the absence of field screen indications of PASS. The SMEC (2022) sample was collected in the same area as SLR SED04, which did indicate PASS based on field screen and ASS CRS results.

Based on the investigation findings, the following recommendations were made:

- Based on the ASS analysis as part of this investigation and the SMEC (2022) investigation, sediment in close proximity to SED03 and SED04, near top of Gustav

Creek, is indicative of PASS. In accordance with the NASSG (2018), net acidity of any ASS material equal to or exceeding the action criterion will require a detailed ASS Management Plan (ASSMP) prior to disturbance.

- The preliminary sediment sampling within the Site did not exceed the adopted NAGD (2009), ASC NEPM and PFAS NEMP (2025) assessment criteria. The findings were generally consistent with the previous site assessment completed by SMEC (2022), which indicates the sediment is suitable for land-based re-use and/or offshore ocean disposal in accordance with the relevant guideline criteria for non-ASS conditions. As noted above, based on the PASS results sediment dredged from the Site should be managed under an ASSMP.
- Any dredging works completed within the Site will require the development of a Construction Environmental Management Plan (CEMP), or similar, and include procedures for assessing and managing potentially contaminated sediment, including ASS. A suitable qualified person should be commissioned to assess potential impacts and provide management strategies, if required.

9.0 References

Bureau of Meteorology (2025). Climate Data Online – Townsville Aero. Available at: http://www.bom.gov.au/climate/data/index.shtml. [Accessed February 2025]

Commonwealth of Australia (2018). *National Acid Sulfate Soils Guidance: Guidelines for the dredging of acid sulfate soil sediments and associated dredge spoil management*. June 2018.

Department of Resources and Department of Environment, Science and Innovation (2024). *Queensland Acid Sulfate Soil Technical Manual: Soil Management Guidelines*. Version 5.1 (2024)

Department of the Environment, Water, Heritage and Arts (2009). *National Assessment Guidelines for Dredging* (NAGD).

Heads of EPA Australia and New Zealand (2025*), PFAS National Environmental Management Plan* (PFAS NEMP), Version 3.0

National Environment Protection Council (2013), *National Environment Protection (Assessment of Site Contamination) Measure 1999, (amendment 1, 2013), Canberra, 2013*

Queensland Globe (2024). Queensland Globe. Available at: https://qldglobe.information.qld.gov.au/ [Accessed February 2025].

SLR (2025). *Nelly Bay Dredging Sediment Investigation – Sampling & Analysis Plan* (SAP). 5 February 2025.

SMEC (2022). *Nelly Bay Harbour Maintenance Dredging Campaign, Appendix K – Sediment Investigation Report*. 20 July 2022.

TCC (2024). Nelly Bay Harbour – Pre dredge Hydrographic Survey. 19 February 2024.

10.0 Uncertainty of sampling

10.1 Specific limitations

There is uncertainty associated with the sampling, analysis and quality associated with any environmental investigation. Assessing every point aspect of a site both spatially and temporally is not feasible not feasible. Therefore, some variations in environmental data collected across an investigation area are expected. As such, observations made within an environmental investigation are based solely on the available data and may be interpreted based on professional judgement and experience but remain limited to the information available at the time.

Potentially contaminated material may vary in its vertical and lateral extent. No extent of monitoring, common testing, or sampling techniques can fully eliminate the possibility that monitoring and / or testing results are not necessarily representative of all environmental conditions encountered. The sampling results obtained will be representative of the conditions at the point at which the sample was taken; environmental field monitoring and/or testing are indicative of the environmental conditions only at the time of sampling.

10.2 Mitigation measures

The potential limitations associated with the uncertainty of sampling environmental media may be reduced but not necessarily fully eliminated. Several mitigation measures may be implemented to reduce the limitations and uncertainty of any investigation. This report aims to provide a preliminary information to inform development of any mitigation measures or to complete further assessment at the Site.

This report has been prepared for the Site and limited to the proposed scope of works (preliminary assessment of contaminants present within sediment at the Site). These potential uncertainties may be reduced by following this investigation, but they cannot be totally removed from any assessment.

10.3 Limitations

The following information will assist in understanding the uncertainties relating to the interpretation of the data obtained during this investigation and the recommendations presented in the report and help with assessment and interpretation of the report.

SLR assumes no responsibility for the quality or accuracy of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

All work conducted, and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions, and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR, is suitable for a specific objective.

Services were conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that SLR cannot guarantee that all issues of concern/contamination have been identified.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

Appendix A Previous investigation (SMEC 2022)

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

FIGURE TITLE:	Figure 1-2: Sediment sampling locations	DATE:	30-06-2022
DRAWING NO.	V1		
PROJECT NO.	30033614	PROJECT TITLE:	Nelly Bay Harbour Maintenance Dredging

0 100 200 300 m

CREATED BY Lochlan Jones

SMEC
Member of the Surbana Jurong Group

SMEC AUSTRALIA PTY LTD
ABN 47 065 475 149

Table 1- Metals, TRH, BTEXN

			Metals														
			Aluminium	Antimony	Arsenic	Cadmium	Chromium (III+VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Nickel	Selenium	Silver	Vanadium	Zinc
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			50	0.5	1	0.1	1	0.5	1		1	10	0.01	1	0.1	0.1	2	1
NAGD 2009 Screening Levels				2	20	1.5	80		65		50		0.15	21		1		
NEPM 2013 Table 1A(1) HILs Rec C Soil					300	90		300	17,000		600	19,000	80	1,200	700			30,000
NEPM 2013 Table 1A(1) HILs Res A Soil					100	20		100	6,000		300	3,800	40	400	200			7,400
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance					40													
Field ID	Date	Lab Report Number																
NBH01/0.0-0.45	19/05/2022	EB2214480	7,000	<0.50	6.16	<0.1	13.2	4.8	50.2	11,600	14.6	144	0.03	7.6	0.5	0.1	20.3	67.8
NBH02/0.0-0.38	19/05/2022	EB2214480	3,380	<0.50	2.63	<0.1	5.6	2.1	21.8	5,830	8.2	72	0.01	3.2	0.2	<0.1	9.4	31.8
NBH02/0.8-0.76	19/05/2022	EB2214480	3,820	<0.50	3.00	<0.1	5.4	2.4	11.0	6,100	10.1	80	0.02	3.3	0.3	<0.1	10.3	26.3
NBH03/0.0-0.5	19/05/2022	EB2214480	2,660	<0.50	1.37	<0.1	3.7	1.5	10.8	5,470	8.2	40	<0.01	2.0	0.2	<0.1	9.6	24.7
NBH04/0.0-0.6	19/05/2022	EB2214480	6,020	<0.50	4.70	<0.1	9.8	3.6	28.7	11,100	15.0	119	0.02	5.7	0.5	<0.1	18.6	48.4
NBH04/0.6-1.0	19/05/2022	EB2214480	1,180	<0.50	<1.00	<0.1	<1.0	<0.5	1.1	1,100	2.3	<10	<0.01	<1.0	0.1	<0.1	<2.0	2.6
NBH05/0.0-0.5	19/05/2022	EB2214480	7,220	<0.50	7.04	<0.1	14.5	4.3	38.6	11,600	13.4	180	0.02	8.0	0.6	<0.1	21.9	56.2
NBH05/0.5-0.7	19/05/2022	EB2214480	4,570	<0.50	4.26	<0.1	7.2	2.8	9.7	7,200	9.2	131	0.01	4.2	0.4	<0.1	13.4	22.5
NBH06/0.0-0.6	19/05/2022	EB2214480	5,420	<0.50	4.10	<0.1	11.1	3.2	12.0	8,480	9.2	154	0.01	6.2	0.4	<0.1	17.5	31.0
NBH06/0.6-1.2	19/05/2022	EB2214480	4,650	<0.50	3.41	<0.1	9.8	2.7	10.9	7,380	8.1	151	0.01	5.4	0.4	<0.1	15.6	25.5

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

Table 1- Metals, TRH, BTEXN

			BTEX							TRH						TPH				
			Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total BTEX	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.2	0.2	0.2	0.2	0.2	0.5	0.2	3	3	3	3	5	3	3	3	3	5	3
NAGD 2009 Screening Levels															550					550
NEPM 2013 Table 1A(1) HILs Rec C Soil																				
NEPM 2013 Table 1A(1) HILs Res A Soil																				
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																				
Field ID	Date	Lab Report Number																		
NBH01/0.0-0.45	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	36	17	53	<3	<3	23	21	44
NBH02/0.0-0.38	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	21	10	31	<3	<3	14	12	26
NBH02/0.8-0.76	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	16	10	26	<3	<3	9	11	20
NBH03/0.0-0.5	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	242	176	418	<3	<3	170	169	339
NBH04/0.0-0.6	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<12	82	73	155	<3	<6	45	67	112
NBH04/0.6-1.0	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	13	10	23	<3	<3	<6	11	11
NBH05/0.0-0.5	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<12	109	78	187	<3	<6	68	84	152
NBH05/0.5-0.7	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	21	12	33	<3	<3	11	14	25
NBH06/0.0-0.6	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<12	87	46	133	<3	<6	62	51	113
NBH06/0.6-1.2	19/05/2022	EB2214480	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<3	<3.0	<6	41	22	63	<3	<3	26	25	51

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

30033614
Nelly Bay Sediment Investigation

Table 2- Polycyclic Aromatic Hydrocarbons

			PAH																			
			2-methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Coronene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(e)pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Perylene	Pyrene	PAHs (Sum of total)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.005	0.004	0.004	0.004	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.005	0.004	0.004	0.004	0.004
NAGD 2009 Screening Levels																							10
NEPM 2013 Table 1A(1) HILs Rec C Soil																							300
NEPM 2013 Table 1A(1) HILs Res A Soil																							300
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																			10				
Field ID	Date	Lab Report Number																					
NBH01/0.0-0.45	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004
NBH02/0.0-0.38	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004
NBH02/0.8-0.76	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004
NBH03/0.0-0.5	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	0.015	<0.004	0.015
NBH04/0.0-0.6	19/05/2022	EB2214480	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.019	<0.005	0.019
NBH04/0.6-1.0	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004
NBH05/0.0-0.5	19/05/2022	EB2214480	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
NBH05/0.5-0.7	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004
NBH06/0.0-0.6	19/05/2022	EB2214480	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
NBH06/0.6-1.2	19/05/2022	EB2214480	<0.005	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.005	<0.004	<0.004	<0.004	<0.004

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

Table 3 - PFAS Results

			Perfluoroalkane Carboxylic Acids											Perfluoroalkane Sulfonic Acids					
			Perfluorobutanoic acid (PFBA)	Perfluorohexanoic acid (PFHxA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctane sulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
PFAS NEMP 2020 Ecological direct exposure							10,000											1,000	
PFAS NEMP 2020 Ecological indirect exposure																		10	
PFAS NEMP 2020 Industrial/ commercial (HIL D)							5,000												
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)							100												
Field ID	Date	Lab Report Number																	
DUP01	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH01/0.0-0.45	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH02/0.0-0.38	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH02/0.8-0.76	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH03/0.0-0.5	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH04/0.0-0.6	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH04/0.6-1.0	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH05/0.0-0.5	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH05/0.5-0.7	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH06/0.0-0.6	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
NBH06/0.6-1.2	19/05/2022	EB2214480	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Environmental Standards
HEPA, January 2020, PFAS NEMP 2020 Ecological direct exposure
HEPA, January 2020, PFAS NEMP 2020 Ecological indirect exposure
HEPA, January 2020, PFAS NEMP 2020 Industrial/ commercial (HIL D)
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)

Table 3 - PFAS Results

			Perfluoroalkyl Sulfonamides							(n:2) Fluorotelomer Sulfonic Acids				PFAS		
			Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Sum of PFHxS and PFOS	Sum of PFAS	Sum of PFAS (WA DER List)
			µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL			0.2	0.5	0.2	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.2	0.2	0.2
PFAS NEMP 2020 Ecological direct exposure																
PFAS NEMP 2020 Ecological indirect exposure																
PFAS NEMP 2020 Industrial/ commercial (HIL D)														2,000		
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A)														10		
Field ID	Date	Lab Report Number														
DUP01	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH01/0.0-0.45	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH02/0.0-0.38	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH02/0.8-0.76	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH03/0.0-0.5	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH04/0.0-0.6	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH04/0.6-1.0	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH05/0.0-0.5	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH05/0.5-0.7	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH06/0.0-0.6	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2
NBH06/0.6-1.2	19/05/2022	EB2214480	<0.2	<0.5	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<0.2	<0.2

Environmental Standards
HEPA, January 2020, PFAS NEMP 2020 Ecological direct exposure
HEPA, January 2020, PFAS NEMP 2020 Ecological indirect exposure
HEPA, January 2020, PFAS NEMP 2020 Industrial/ commercial (HIL D)
HEPA, January 2020, PFAS NEMP 2020 Residential with garden/accessible soil (HIL

			Organochlorine Pesticides																						
			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	Methoxychlor	Oxychlordane
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.0005	0.0005	0.0005	0.0005	0.00025	0.00025	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00025	0.0005	0.0005	0.0005	0.0005
NAGD 2009 Screening Levels							0.0005				0.002	0.0016		0.28					0.01			0.00032				
NEPM 2013 Table 1A(1) HILs Rec C Soil							70						400		340				20				10		400	
NEPM 2013 Table 1A(1) HILs Res A Soil							50						240		270				10				6		300	
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance												3														
Field ID	Date	Lab Report Number																								
NBH01/0.0-0.45	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH02/0.0-0.38	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH02/0.8-0.76	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH03/0.0-0.5	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH04/0.0-0.6	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH04/0.6-1.0	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH05/0.0-0.5	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH05/0.5-0.7	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH06/0.0-0.6	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050
NBH06/0.6-1.2	19/05/2022	EB2214480	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00025	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00025	<0.00050	<0.00050	<0.00050	<0.00050

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

			Organophosphorous Pesticides															Pesticides			
			Azinophos methyl	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos E	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	cis-Chlorfenvinphos	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Prothiofos	Demeton-S-methyl	Fenamiphos	Parathion	Pirimphos-ethyl
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
NAGD 2009 Screening Levels																						
NEPM 2013 Table 1A(1) HILs Rec C Soil							250															
NEPM 2013 Table 1A(1) HILs Res A Soil							160															
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																						
Field ID	Date	Lab Report Number																				
NBH01/0.0-0.45	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH02/0.0-0.38	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH02/0.8-0.76	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH03/0.0-0.5	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH04/0.0-0.6	19/05/2022	EB2214480	<0.012	<0.012	<0.012	<0.0120	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
NBH04/0.6-1.0	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH05/0.0-0.5	19/05/2022	EB2214480	<0.012	<0.012	<0.012	<0.0120	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
NBH05/0.5-0.7	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
NBH06/0.0-0.6	19/05/2022	EB2214480	<0.012	<0.012	<0.012	<0.0120	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
NBH06/0.6-1.2	19/05/2022	EB2214480	<0.01	<0.01	<0.01	<0.0100	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

Table 5- PCB, halogenated benzene

			Organic	Organotins			PCBs								Halogenated Benzenes	Inorganics
			Total Organic Carbon	Dibutyltin (as Sn)	Monobutyletin (as Sn)	Tributyltin as SN	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	Hexachlorobenzene	Moisture Content
			%	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL			0.02	1	1	0.0005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.0005	0.1
NAGD 2009 Screening Levels														23		
NEPM 2013 Table 1A(1) HILs Rec C Soil														1	10	
NEPM 2013 Table 1A(1) HILs Res A Soil														1	10	
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																
Field ID	Date	Lab Report Number														
NBH01/0.0-0.45	19/05/2022	EB2214480	0.91	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	48.1
NBH02/0.0-0.38	19/05/2022	EB2214480	0.17	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	32.6
NBH02/0.8-0.76	19/05/2022	EB2214480	0.24	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	25.0
NBH03/0.0-0.5	19/05/2022	EB2214480	1.44	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	45.1
NBH04/0.0-0.6	19/05/2022	EB2214480	2.19	<1	<1	<0.0005	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.00050	55.5
NBH04/0.6-1.0	19/05/2022	EB2214480	0.09	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	19.1
NBH05/0.0-0.5	19/05/2022	EB2214480	1.43	<1	<1	<0.0005	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.00050	53.5
NBH05/0.5-0.7	19/05/2022	EB2214480	0.83	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	38.9
NBH06/0.0-0.6	19/05/2022	EB2214480	1.32	<1	<1	<0.0005	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.0312	<0.00050	51.8
NBH06/0.6-1.2	19/05/2022	EB2214480	0.98	<1	<1	<0.0005	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.0156	<0.00050	43.5

Environmental Standards
2013, NEPM 2013 Table 1A(1) HILs Rec C Soil
2013, NEPM 2013 Table 1A(1) HILs Res A Soil
NEPM, NEPM 2013 Table 1B(7) Management Limits in Res / Parkland, Coarse Soil

			Particle Size Distribution																
			+1180µm	+150µm	+19.0mm	+2.36mm	+300µm	+37.5mm	+4.75mm	+425µm	+600µm	+75.0mm	+75µm	+9.5mm	Clay in soils <2um	Cobbles (>6cm)	Gravel (>2mm)	Sand (0.06-2.00 mm)	Silt (2-60 µm)	Density
			%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	g/cm3
EQL			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.01
Field ID	Date	Lab Report Number																		
NBH01/0.0-0.45	19/05/2022	EB2214480	18	39	<1	7	35	<1	2	32	28	<1	43	<1	29	<1	11	35	25	2.47
NBH02/0.0-0.38	19/05/2022	EB2214480	19	57	<1	7	40	<1	<1	33	29	<1	73	<1	14	<1	10	65	11	2.31
NBH02/0.8-0.76	19/05/2022	EB2214480	23	54	<1	6	47	<1	<1	42	37	<1	61	<1	22	<1	11	51	16	2.56
NBH03/0.0-0.5	19/05/2022	EB2214480	15	74	<1	6	53	<1	1	39	28	<1	84	<1	9	<1	8	78	5	2.48
NBH04/0.0-0.6	19/05/2022	EB2214480	5	21	<1	2	13	<1	<1	10	9	<1	33	<1	33	<1	3	32	32	2.24
NBH04/0.6-1.0	19/05/2022	EB2214480	53	86	<1	19	80	<1	1	76	70	<1	89	<1	5	<1	30	60	5	2.61
NBH05/0.0-0.5	19/05/2022	EB2214480	<1	5	<1	<1	2	<1	<1	2	1	<1	16	<1	43	<1	<1	17	40	2.83
NBH05/0.5-0.7	19/05/2022	EB2214480	10	21	<1	3	18	<1	<1	16	14	<1	30	<1	29	<1	5	27	39	2.25
NBH06/0.0-0.6	19/05/2022	EB2214480	1	5	<1	1	3	<1	<1	2	2	<1	30	<1	22	<1	1	35	42	2.27
NBH06/0.6-1.2	19/05/2022	EB2214480	1	8	<1	<1	4	<1	<1	3	2	<1	45	<1	28	<1	1	48	23	2.35

Table 7 - Acid Sulfate Soils

			Acid Sulphate Soils			Acid Sulphate Soils - Acid Base Accounting				Acid Sulphate Soils - Acidity Trail		Acid Sulphate Soils - Field		Acid Sulphate Soils - Liming Rate		Acid Sulphate Soils - Potential Acidity		Acid Sulphate Soils - ANC			Organic	Organotins		
			Reaction Rate	s-Net Acidity without ANCE	pH (KCl)	a-Net Acidity without ANCE	ANC Fineness Factor	Net Acidity (acidity units)	Net Acidity (sulfur units)	Titratable Actual Acidity (sulfur units)	Titratable Actual Acidity	pHF	pHFox	Liming Rate	Liming Rate excluding ANC	Chromium Reducible Sulphur (acidity units)	Chromium Reducible Sulfur	Acid Neutralising Capacity (acidity units)	Acid Neutralising Capacity	Acid Neutralising Capacity (sulfur units)	Total Organic Carbon	Dibutyltin (as Sn)	Monobutyletin (as Sn)	Tributyltin as SN
			-	% S	-	moles H+/t	-	mole H+/t	%S	%S	mole H+/t	-	-	kg CaCO3/t	kg CaCO3/t	mole H+/t	%S	mole H+/t	%CaCO3	%S	%	µg/kg	µg/kg	mg/kg
EQL			1	0.02	0.1	10	0.5	10	0.02	0.02	2	0.1	0.1	1	1	10	0.005	10	0.01	0.01	0.02	1	1	0.0005
Field ID	Date	Lab Report Number																						
DUP01	19/05/2022	EB2214480	3									8.5	6.2								1.33	<1	<1	<0.0005
NBH01/0.0-0.45	19/05/2022	EB2214480	3									8.9	6.3								0.91	<1	<1	<0.0005
NBH02/0.0-0.38	19/05/2022	EB2214480	2									8.8	6.4								0.17	<1	<1	<0.0005
NBH02/0.8-0.76	19/05/2022	EB2214480	3									8.9	6.3								0.24	<1	<1	<0.0005
NBH02/0.76-1.06	19/05/2022	EB2214480	2									8.9	6.4											
NBH02/1.06-1.36	19/05/2022	EB2214480	2									8.9	6.4											
NBH03/0.0-0.5	19/05/2022	EB2214480	3									8.4	3.5								1.44	<1	<1	<0.0005
NBH03/0.5-1.0	19/05/2022	EB2214480	3	0.18	8.8	112	1.5	<10	<0.02	<0.02	<2	8.5	1.8	<1	8	112	0.179	172	0.86	0.28	0.78			
NBH03/1.0-1.55	19/05/2022	EB2214480	3	0.27	7.1	170	1.5	133	0.21	<0.02	<2	8.2	1.5	10	13	170	0.273	56	0.28	0.09	1.30			
NBH04/0.0-0.6	19/05/2022	EB2214480	3									8.5	5.8								2.19	<1	<1	<0.0005
NBH04/0.6-1.0	19/05/2022	EB2214480	2									8.3	6.1								0.09	<1	<1	<0.0005
NBH05/0.0-0.5	19/05/2022	EB2214480	3									8.5	6.2								1.43	<1	<1	<0.0005
NBH05/0.5-0.7	19/05/2022	EB2214480	3									8.6	6.2								0.83	<1	<1	<0.0005
NBH05/0.7-1.0	19/05/2022	EB2214480	2									8.7	6.4											
NBH06/0.0-0.6	19/05/2022	EB2214480	3									8.4	6.2								1.32	<1	<1	<0.0005
NBH06/0.6-1.2	19/05/2022	EB2214480	3									8.4	6.2								0.98	<1	<1	<0.0005
NBH06/1.2-1.7	19/05/2022	EB2214480	3									8.5	6.2											
NBH06/1.7-2.3	19/05/2022	EB2214480	3									8.3	6.2											

Appendix B Sediment logs

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

ENVIRONMENTAL BOREHOLE LOG SED01

CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 0 m below sediment bed (bsb)

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS Refusal on compacted gravel material with immediate resistance to vibracoring

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED01	W		0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1	Dark brown sandy GRAVEL, with coarse gravel and fine sand.	N/A	Depth to top of sediment bed approximately 4.7 m
				1.05	End of investigation - refusal on gravel (0.0 m bsb)		

produced by ESlog.ESdat.net on 04 Apr 2025

ENVIRONMENTAL BOREHOLE LOG SED02

CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 0.5 m bsb

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED02_0.5	W		0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5	Black, fine-grained sandy CLAY material. Very stiff material and refusal beyond 0.5m.	N/A	Depth to top of sediment bed approximately 4.4 m.
				0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1			
				1.05	End of investigation - refusal on stiff clays (0.5 m bsb)		

produced by ESlog.ESdat.net on 04 Apr 2025

ENVIRONMENTAL BOREHOLE LOG SED03

CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 2.0 m bsb

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED03_0.5	W		0.1 0.2 0.3 0.4 0.5	Light-brown coarse SAND.	N/A	Depth to top of sediment bed approximately 3.5 m.
	SED03_0.5-1.0			0.6 0.7 0.8 0.9 1	Light--brown coarse SAND. Less resistance compared with previous samples.		
	SED03_1.0-2.0			1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2	Brown, fine SAND. Slightly stiffer than above samples.		Very mild odour.
					End of investigation at target depth.		

produced by ESlog.ESdat.net on 04 Apr 2025

ENVIRONMENTAL BOREHOLE LOG SED04

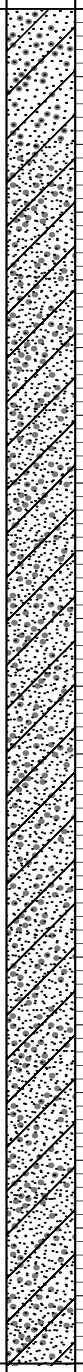
CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 1.0 m bsb

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED04	W		0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1	Black, fine-grained CLAY with traces of coarse sand. Force required to separate material.	N/A	Depth to top of sediment bed approximately 4.8 m. Mild odour.
				1.05	End of investigation at target depth.		

ENVIRONMENTAL BOREHOLE LOG SED05

CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 1.0 m bsb

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED05_0.5	W		0.05 0.1 0.15 0.2 0.25 0.3 0.35 0.4 0.45 0.5	Black, fine-grained CLAY. Force required to separate material.	N/A	Depth to top of sediment bed approximately 4.2 m. Strong odour.
				0.55 0.6 0.65 0.7 0.75 0.8 0.85 0.9 0.95 1			
				1.05	End of investigation at target depth.		

ENVIRONMENTAL BOREHOLE LOG SED06

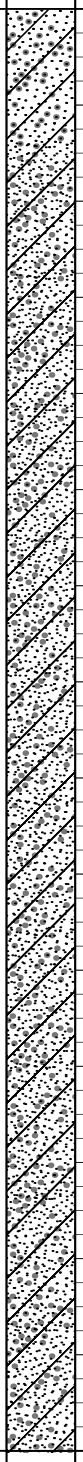
CLIENT TCC
PROJECT NAME Sediment Investigation
PROJECT NUMBER 623.030475.00005

METHOD Vibracoring (VC)
HOLE DIAMETER 50 mm
HOLE DEPTH 3.0 m bsb

DATE COMMENCED 27/02/2025
DATE COMPLETED 27/02/2025

COMMENTS

LOGGED BY SH
CHECKED BY PH

Drilling Method	Samples	Moisture	Graphic Log	Depth (m)	Material Description	PID	Additional Observations
VC	SED06	W		0.2 0.4 0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3	Black, fine-grained sandy CLAY with high plasticity and some coarse gravel.	N/A	Depth to top of sediment bed approximately 4.2 m. Strong sulfur-like odour.
					End of investigation at target depth.		

produced by ESlog.ESdat.net on 04 Apr 2025

Appendix C Sediment core images

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

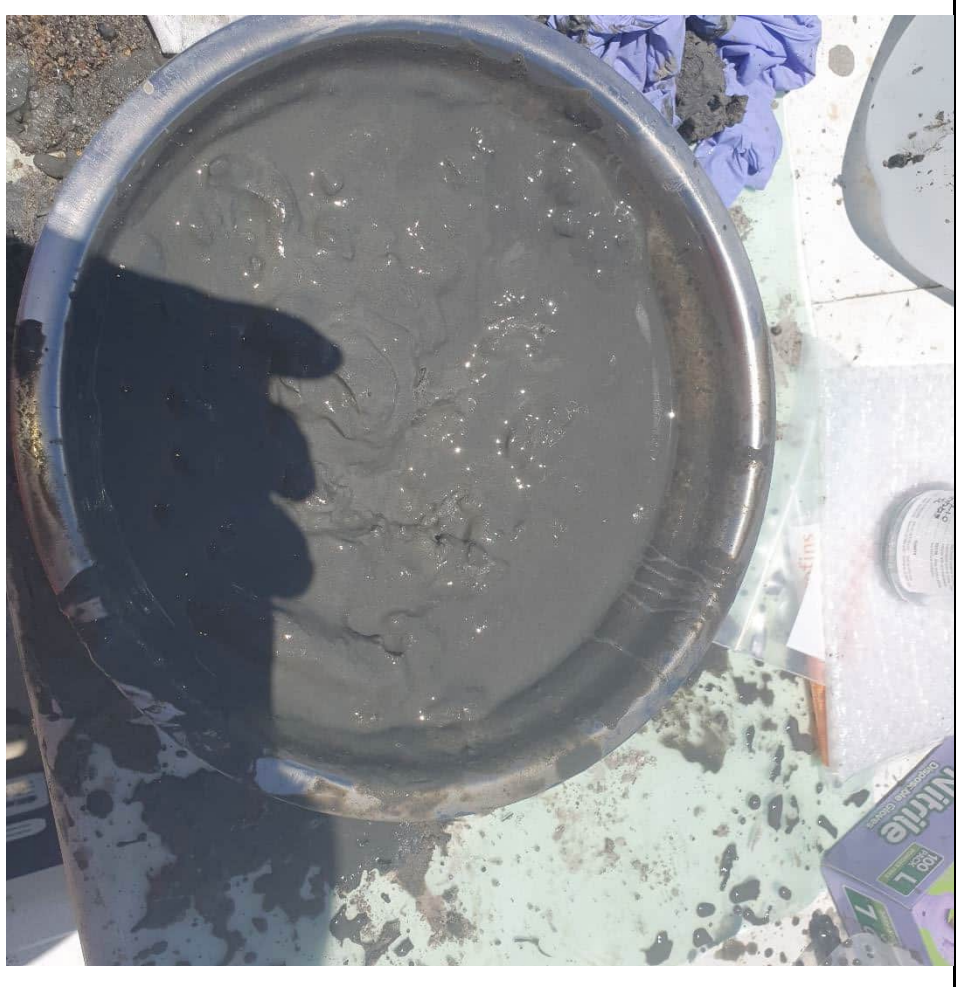
Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

Photographic Log

Photo 1: SED02_0.5	Photo 2: SED03_0.5
	
Photo 3: SED03_1.0	**Photo 4: SED03_2.0**
	

Photo 5: SED04_0.5	Photo 6: SED04_1.0
	
Photo 7: SED05_0.5	**Photo 8: SED05_1.0**
	

Appendix D Analytical results summary tables

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

ASS pH field screen analytical results summary

Work Order	Sample ID	Sample date	pH-F	AASS likelihood	pH-FOX	Δ pH	Reaction rating	PASS likelihood	CRS scheduled
1193807	SED02_0.5	27/02/2025	8.8	Unlikely (pHF > 4)	7.1	1.7	4	Rare	No
1193807	SED03_0.5	27/02/2025	8.3	Unlikely (pHF > 4)	3.9	4.4	4	Unlikely	Yes
1193807	SED03_1.0	27/02/2025	8.6	Unlikely (pHF > 4)	5.3	3.3	4	Unlikely	No
1193807	SED03_2.0	27/02/2025	8.1	Unlikely (pHF > 4)	3.4	4.7	4	Unlikely	Yes
1193807	SED04_0.5	27/02/2025	8.9	Unlikely (pHF > 4)	6.8	2.1	4	Unlikely	Yes
1193807	FD02	27/02/2025	8.4	Unlikely (pHF > 4)	6.8	1.6	4	Unlikely	No
1193807	SED04_1.0	27/02/2025	8.5	Unlikely (pHF > 4)	6.9	1.6	4	Unlikely	No
1193807	SED05_0.5	27/02/2025	8.5	Unlikely (pHF > 4)	7.8	0.7	4	Unlikely	No
1193807	SED05_1.0	27/02/2025	8.6	Unlikely (pHF > 4)	7.5	1.1	4	Unlikely	No
1193807	SED06_0.5	27/02/2025	8.4	Unlikely (pHF > 4)	7.8	0.6	4	Unlikely	No
1193807	SED06_1.0	27/02/2025	8.5	Unlikely (pHF > 4)	7.6	0.9	4	Unlikely	No
1193807	SED06_2.0	27/02/2025	8.3	Unlikely (pHF > 4)	7.4	0.9	4	Unlikely	No

A typical value that may indicate the presence of actual acid sulfate soil (AASS) is:
- pHF value of 4 or less

Values that indicate the presence of potential acid sulfate soils (PASS) may include:
- pHFOX value of 3 or less
- ΔpH greather than 2 (from pHF to pHFOX)
- To a much lesser extent, a 'vigorous' observed reaction rate (or extreme/volcanic)

National Acid Sulfate Soils Guidelines 2018 (Sullivan et at. 2018)

PASS likelihood
Rare - pHFOX > 3, ΔpH < 2, reaction <= 3
Unlikely - pHFOX > 3, ΔpH > 2, reaction > 3
Possible - pHFOX <=3, ΔpH > 2, reaction > 3

Sediment analytical summary results

Location Code	Sample Type	Field ID	Date	Lab Report Number	Soil parameters						Metals									
					Moisture Content	% Clay*	% Sand*	% Silt*	pH (F)	TOC	Arsenic	Cadmium	Chromium (III+VI)	Copper	Antimony	Silver	Lead	Mercury	Nickel	Zinc
					%	%	%	%	pH Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	2.5			0.1	1,000	2	0.4	5	5	10	2	5	0.1	5	5
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)											20[#1]	1.5	80	65	2	1	50	0.15	21[#2]	200
NEPM 2013 Table 1A(1) HILs Rec C Soil											300[#5]	90		17,000			600[#6]	80[#7]	1,200	30,000
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																				
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance											40[#11]									
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																				
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																				
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																				
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																				
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	35	7.0	49	40	8.8	39,000	4.7	<0.4	12	26	<10	<2	13	<0.1	6.1	46
	Field_D	FD01	27 Feb 2025	1193807	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	37.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	17	<2.5	20	40	8.3	18,000	<2	<0.4	<5	<5	<10	<2	<5	<0.1	<5	6.5
	Normal	SED03_1.0	27 Feb 2025	1193807	19	<2.5	55	40	8.6	13,000	<2	<0.4	<5	<5	<10	<2	<5	<0.1	<5	5.9
	Normal	SED03_2.0	27 Feb 2025	1193807	41	8.0	53	40	8.1	21,000	2.0	<0.4	7.7	8.6	<10	<2	7.3	<0.1	<5	22
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	21	10	50	40	8.9	14,000	2.3	<0.4	6.1	5.7	<10	<2	9.5	<0.1	<5	22
	Field_D	FD02	27 Feb 2025	1193807	40	-	-	-	8.4	-	<2	<0.4	9.4	13	<10	<2	15	<0.1	5.5	39
	Inter_lab	FT02	27 Feb 2025	EB2509853	44.2	-	-	-	-	-	<5	<1	6	15	<5	<2	11	<0.1	4	32
	Normal	SED04_1.0	27 Feb 2025	1193807	44	7.0	51	40	8.5	26,000	3.3	<0.4	7.8	9.8	<10	<2	11	<0.1	<5	29
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	37	10	50	40	8.5	40,000	5.0	<0.4	11	8.1	<10	<2	11	<0.1	6.8	28
	Field_D	FD03	27 Feb 2025	1193807	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	38.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807	42	10	49	40	8.6	34,000	4.9	<0.4	13	14	<10	<2	9.8	<0.1	8.1	32
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	47	7.0	52	40	8.4	<1,000	5.5	<0.4	28	13	<10	<2	15	<0.1	15	43
	Normal	SED06_1.0	27 Feb 2025	1193807	38	7.0	52	40	8.5	62,000	4.6	<0.4	18	8.4	<10	<2	11	<0.1	9.3	29
	Normal	SED06_2.0	27 Feb 2025	1193807	40	8.0	53	40	8.3	74,000	3.6	<0.4	14	8.1	<10	<2	9.6	<0.1	8.7	26
	Normal	SED06_3.0	27 Feb 2025	1197082	37	-	-	-	-	-	7.7	<0.4	23	17	<10	<2	10	<0.1	10	33

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies

#2 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies.

#3 Screening Level is below PQL (Table 1). Reporting results for the above substances should be either 'detected' or 'not detected' unless a PQL better than the Screening Level could be achieved.

#4 Where a numerical maximum value (ISQG-High) for TBT is required, the USEPA's final chronic value of 80 µg/kg may be used.

#5 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Shedule B7).

#6 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability should be considered where appropriate.

#7 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspected to be present.

#8 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sample by its BaP TEF (ref Table 1A(1)) & summing

#9 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (inc dioxin like PCBs) should be undertaken

#10 Derived soil HSL exceeds soil saturation concentraiton

#11 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.

#12 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

#13 To obtain F2 subtract napthalene from the >C10 - C16 fraction.

Environmental Standards

DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)

HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)

HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)

HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

					BTEXN						TPH					TRH							
					Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Naphthalene (VOC)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Total)	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34 (F3)	C34-C40 (F4)	C10-C40 (Total)
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.1	0.1	0.1	0.2	0.1	0.3	0.5	20	20	50	50	50	20	20	50	50	100	100	100
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)																							
NEPM 2013 Table 1A(1) HILs Rec C Soil																							
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand					#10	#10	#10			#10								#10		#10			
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																							
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil					8	10	1.5			10								125[#12]		25[#13]			
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																							
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																							
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																							
Location Code	Sample Type	Field ID	Date	Lab Report Number																			
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Normal	SED03_1.0	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Normal	SED03_2.0	27 Feb 2025	1193807	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	96	220	316	<20	<20	<50	<50	240	150	390
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Field_D	FD02	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Normal	SED06_1.0	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Normal	SED06_2.0	27 Feb 2025	1193807	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100
	Normal	SED06_3.0	27 Feb 2025	1197082	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50	<20	<20	<50	<50	<100	<100	<100

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5
#2 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent
(equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies.
#3 Screening Level is below PQL (Table 1). Reporting results for the above substances should be either 'detected' or 'not
detected' unless a PQL better than the Screening Level could be achieved.
#4 Where a numerical maximum value (ISQG-High) for TBT is required, the USEPA's final chronic value of 80 µg/kg may
be used.
#5 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Shedule B
#6 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability
#7 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspect
#8 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sam
#9 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (in
#10 Derived soil HSL exceeds soil saturation concentraiton
#11 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
#12 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#13 To obtain F2 subtract napthalene from the >C10 - C16 fraction.

Environmental Standards
DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)
HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

						PAH															
						Acenaphthene	Naphthalene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene	Sum of polycyclic aromatic hydrocarbons	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)																									
NEPM 2013 Table 1A(1) HILs Rec C Soil																							3[#8]	3[#8]	3[#8]
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand							#10																		
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance							10																		
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil						1.4																			
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																									
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																									
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																									
Location Code	Sample Type	Field ID	Date	Lab Report Number																					
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Normal	SED03_1.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Normal	SED03_2.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Field_D	FD02	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Normal	SED06_1.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Normal	SED06_2.0	27 Feb 2025	1193807	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5
	Normal	SED06_3.0	27 Feb 2025	1197082	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5

Comments

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Environmental Standards
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HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

					PFAS																				
					Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)
					µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL					5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	5	5	5	10
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)																											
NEPM 2013 Table 1A(1) HILs Rec C Soil																											
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																											
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																											
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																											
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)					1,000				1,000						10,000												
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)									1,000						10,000												
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)									3						3												
Location Code	Sample Type	Field ID	Date	Lab Report Number																							
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Field_D	FD01	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Inter_lab	FT01	27 Feb 2025	EB2509853	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Normal	SED03_1.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Normal	SED03_2.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Field_D	FD02	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Field_D	FD03	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Inter_lab	FT03	27 Feb 2025	EB2509853	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2
	Normal	SED05_1.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Normal	SED06_1.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Normal	SED06_2.0	27 Feb 2025	1193807	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10
	Normal	SED06_3.0	27 Feb 2025	1197082	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5	<10

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5
#2 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent
(equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies.
#3 Screening Level is below PQL (Table 1). Reporting results for the above substances should be either 'detected' or 'not
detected' unless a PQL better than the Screening Level could be achieved.
#4 Where a numerical maximum value (ISQG-High) for TBT is required, the USEPA's final chronic value of 80 µg/kg may
be used.
#5 Arsenic: HIL assumes 70% oral bioavailability. Site-specific bioavailability maybe important and should be considered where appropriate (refer Shedule B
#6 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability
#7 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspect
#8 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sam
#9 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (in
#10 Derived soil HSL exceeds soil saturation concentraiton
#11 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
#12 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#13 To obtain F2 subtract napthalene from the >C10 - C16 fraction.

Environmental Standards
DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)
HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

															Organo Metals
				N-ethyl perfluorooctane sulfonamidoethanol (NEtFOSE)	Perfluorooctane sulfonamide (PFOSA)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	Sum of PFAS	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DWER PFAS (n=10)*	Tributyltin oxide (TBTO)
				µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg
EQL				5	5	5	10	5	50	5	5	5	5	5	10	1.25
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)																
NEPM 2013 Table 1A(1) HILs Rec C Soil																
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)										1,000						
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																
Location Code	Sample Type	Field ID	Date	Lab Report Number												
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Field_D	FD01	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5	-	-	<0.2	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Normal	SED03_1.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Normal	SED03_2.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Field_D	FD02	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Field_D	FD03	27 Feb 2025	1193807	<5	<5	<5	<10	<5	-	-	<5	<5	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5	-	-	<0.2	-
	Normal	SED05_1.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Normal	SED06_1.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Normal	SED06_2.0	27 Feb 2025	1193807	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<1.25
	Normal	SED06_3.0	27 Feb 2025	1197082	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	-

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5
#2 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent
(equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies.
#3 Screening Level is below PQL (Table 1). Reporting results for the above substances should be either 'detected' or 'not
detected' unless a PQL better than the Screening Level could be achieved.
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Environmental Standards
DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)
HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

						Organochlorine Pesticides																			
						Chlordane	d-BHC	DDT	Heptachlor epoxide	DDD	Methoxychlor	DDT+DDE+DDD	Dieldrin	Endrin	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	Endrin ketone	g-BHC (Lindane)	b-BHC	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin aldehyde	Heptachlor
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL						0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)						0.0005[#3]		0.0016					0.28	0.01								0.00032[#3]						
NEPM 2013 Table 1A(1) HILs Rec C Soil						70					400	400		20						10								10
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																											
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance								3																			
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																											
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																											
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																											
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																											
Location Code	Sample Type	Field ID	Date	Lab Report Number																							
SED02	Normal	SED02_0.5	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Field_D	FD01	27 Feb 2025	1193807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Normal	SED03_1.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Normal	SED03_2.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SED04	Normal	SED04_0.5	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Field_D	FD02	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Inter_lab	FT02	27 Feb 2025	EB2509853		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SED05	Normal	SED05_0.5	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Field_D	FD03	27 Feb 2025	1193807		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SED06	Normal	SED06_0.5	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Normal	SED06_1.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Normal	SED06_2.0	27 Feb 2025	1193807		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	Normal	SED06_3.0	27 Feb 2025	1197082		<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5
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Environmental Standards
DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)
HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

					Organophosphorous Pesticides																					
					Azinophos methyl	Chlorfenvinphos	Chlorpyrifos-methyl	Chlorpyrifos	Diazinon	Dichlorvos	Dimethoate	Ethion	Disulfoton	EPN	Ethoprop	Fenitrothion	Merphos	Bolstar (Sulprofos)	Coumaphos	Demeton-O	Demeton-S	Fensulfothion	Mevinphos (Phosdrin)	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)																										
NEPM 2013 Table 1A(1) HILs Rec C Soil								250																		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																										
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																										
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																										
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																										
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																										
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																										
Location Code	Sample Type	Field ID	Date	Lab Report Number																						
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Normal	SED03_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Normal	SED03_2.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Field_D	FD02	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Normal	SED06_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Normal	SED06_2.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2
	Normal	SED06_3.0	27 Feb 2025	1197082	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2

Comments

#1 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent (equates to multiplication factors of 5
#2 Normalised to 1 per cent total organic carbon. Normalisation is only appropriate over the TOC range 0.2–10 per cent
(equates to multiplication factors of 5 times–0.1 times, respectively. Outside this range, use the end value which applies.
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detected' unless a PQL better than the Screening Level could be achieved.
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be used.
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#6 Lead: HILs A,B,C based on blood lead models (IEUBK & HIL D on adult lead model for where 50% bioavailability considered. Site-specific bioavailability
#7 Elemental mercury: HIL does not address elemental mercury. a site specific assessment should be considered if elemental mercury is present, or suspect
#8 Carcinogenic PAHs: HIL based on 8 carc. PAHs & their TEFs (rel to BaP ref Schedule 7) BaP TEQ calc by multiplying the conc of each carc. PAH in sam
#9 PCBs: HIL refers to non-dioxin like PCBs only. Where PCB source is known, or suspected at a site, a site-specific assessment of exposure to all PCBs (in
#10 Derived soil HSL exceeds soil saturation concentraiton
#11 Aged values apply to arsenic contamination present in soil > 2 years. Refer Schedule B5c for < 2 years.
#12 To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.
#13 To obtain F2 subtract napthalene from the >C10 - C16 fraction.

Environmental Standards
DoE, 2000, DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)
HEPA, March 2025, PFAS NEMP 2025 Table 5 Soil HIL C (public open space)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil EDE (all land uses)
HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Sediment analytical summary results

													PCBs								Halogenated Benzenes	Organotins	
				Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Tokuthion	Pirimiphos-methyl	Parathion	Methyl parathion	Fenthion	Malathion	Monocrotophos	PCBs (Sum of total)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Hexachlorobenzene	Tributyltin	Tributyltin as SN_
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	1.25	0.5
DCCEEW 2009 NAGD Table 2 Screening Level (ISQG Trigger Value)															0.023									0.009[#4]	
NEPM 2013 Table 1A(1) HILs Rec C Soil															1[#9]								10		
NEPM 2013 Table 1A(3) Rec C Soil HSL for Vapour Intrusion, Sand																									
NEPM 2013 Table 1B(5) Generic EIL - Areas of Ecological Significance																									
NEPM 2013 Table 1B(6) ESLs for Areas of Ecological Significance, Coarse Soil																									
PFAS NEMP 2025 Table 5 Soil HIL C (public open space)																									
PFAS NEMP 2025 Table 6 Soil EDE (all land uses)																									
PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)																									
Location Code	Sample Type	Field ID	Date	Lab Report Number																					
SED02	Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SED03	Normal	SED03_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Normal	SED03_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Normal	SED03_2.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
SED04	Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Field_D	FD02	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-
	Inter_lab	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED04_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
SED05	Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Inter_lab	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Normal	SED05_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
SED06	Normal	SED06_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Normal	SED06_1.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Normal	SED06_2.0	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5
	Normal	SED06_3.0	27 Feb 2025	1197082	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-

Comments

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HEPA, March 2025, PFAS NEMP 2025 Table 6 Soil Interim EIE (all land uses)

Trip blank analytical results summary

					BTEXN							TPH	TRH	
					Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Naphthalene (VOC)	C6-C9	C6-C10	C6-C10 (F1 minus BTEX)
					mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL					0.001	0.001	0.001	0.002	0.001	0.003	0.01	0.02	0.02	0.02
Location Code	Sample Type	Field ID	Date	Lab Report Number										
	Trip_B	TB01	27 Feb 2025	1193807	<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	<0.01	<0.02	<0.02	<0.02
Statistics														
Number of Results					1	1	1	1	1	1	1	1	1	1
Number of Detects					0	0	0	0	0	0	0	0	0	0
Minimum Concentration					<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	<0.01	<0.02	<0.02	<0.02
Minimum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration					<0.001	<0.001	<0.001	<0.002	<0.001	<0.003	<0.01	<0.02	<0.02	<0.02
Maximum Detect					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Number of Env Standard Exceedances					0	0	0	0	0	0	0	0	0	0
Number of Env Standard Exceedances (Detects Only)					0	0	0	0	0	0	0	0	0	0

ASS CRS analytical summary

			Particle Size		Actual Acidity		
			<2 mm Fraction	>2 mm fraction	pH KCL	Titratable actual acidity	Sulfidic - titratable actual acidity
			G	G	pH Unit	mole H+/t	%S
EQL			0.005	0.005	0.1	2	0.003
Action Criteria							
Field ID	**Date**	**Sample Type**					
SED03_0.5	27 02 2025	Normal	110	31	8.9	< 2	< 0.003
SED03_1.0	27 02 2025	Normal	11	14	8.3	< 2	< 0.003
SED04_0.5	27 02 2025	Normal	96	2.8	8.9	< 2	< 0.003

ASS CRS analytical summary

			Extractable Sulfur		PotentialAcidity	
			HCL extractable sulfur	KCL extractable sulfur	chromium reducible sulfur	chromium reducible sulfur
			%S	%	%S	mole H+/t
EQL			0.005	0.005	0.005	3
Action Criteria						
Field ID	**Date**	**Sample Type**				
SED03_0.5	27 02 2025	Normal	-	-	0.049	31
SED03_1.0	27 02 2025	Normal	-	-	0.065	40
SED04_0.5	27 02 2025	Normal	-	-	0.46	290

ASS CRS analytical summary

			Retained Acidity			
			HCL extractable sulfur correction factor	Net acid soluble sulfur (in acid units)	Net acid soluble sulfur (in sulfur units)	Net acid soluble sulfur
			FACTOR	mole H+/t	%S	%S
EQL			1	2	0.005	0.005
Action Criteria						
Field ID	**Date**	**Sample Type**				
SED03_0.5	27 02 2025	Normal	2	-	-	-
SED03_1.0	27 02 2025	Normal	2	-	-	-
SED04_0.5	27 02 2025	Normal	2	-	-	-

ASS CRS analytical summary

			Net Acidity - Excluding ANC			Net Acidity - Incluilding ANC			Neutralising Capacity	
			Net acidity (sulfur units) minus ANC	CRS suite - liming rate - NASSG (excluding ANC)	CRS suite - net acidity - NASSG (excluding ANC)	Net acidity (sulfur units) - CRS suite	CRS suite - liming rate - NASSG (including ANC)	CRS suite - net acidity - NASSG (including ANC)	Acid neutralising capacity	ANC fineness factor
			% S	KG CACO3/T	MOL H+/T	% S	KG CACO3/T	MOL H+/T	%CaCO3	-
EQL			0.02	1	10	0.02	1	10	0.01	
Action Criteria			**0.03**		**18**					
Field ID	**Date**	**Sample Type**								
SED03_0.5	27 02 2025	Normal	**0.05**	2.3	**31**	< 0.02	< 1	< 10	0.27	1.5
SED03_1.0	27 02 2025	Normal	**0.06**	3	**40**	< 0.02	< 1	< 10	0.26	1.5
SED04_0.5	27 02 2025	Normal	**0.46**	22	**290**	< 0.02	< 1	< 10	22	1.5

RPD results summary

				Metals										BTEXN							TPH				
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Antimony	Silver	Lead	Mercury	Nickel	Zinc	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Naphthalene (VOC)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 (Total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				2	0.4	2	5	5	2	5	0.1	2	5	0.1	0.1	0.1	0.2	0.1	0.3	0.5	20	20	50	50	50
Sample Type	Field ID	Date	Lab Report Number																						
Normal	SED02_0.5	27 Feb 2025	1193807	4.7	<0.4	12	26	<10	<2	13	<0.1	6.1	46	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED02_0.5	27 Feb 2025	1193807	4.7	<0.4	12	26	<10	<2	13	<0.1	6.1	46	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	2.3	<0.4	6.1	5.7	<10	<2	9.5	<0.1	<5	22	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Field_D	FD02	27 Feb 2025	1193807	<2	<0.4	9.4	13	<10	<2	15	<0.1	5.5	39	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
RPD				**14**	**0**	**43**	**78**	**0**	**0**	**45**	**0**	**10**	**56**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	2.3	<0.4	6.1	5.7	<10	<2	9.5	<0.1	<5	22	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Interlab_D	FT02	27 Feb 2025	EB2509853	<5	<1	6	15	<5	<2	11	<0.1	4	32	-	-	-	-	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**2**	**90**	**0**	**0**	**15**	**0**	**0**	**37**	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	5.0	<0.4	11	8.1	<10	<2	11	<0.1	6.8	28	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	5.0	<0.4	11	8.1	<10	<2	11	<0.1	6.8	28	0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<20	<20	<50	<50	<50
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10 x EQL); 30 (10 - 30 x EQL); 30 (> 50 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

RPD results summary

				TRH							PAH															
				C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34 (F3)	C34-C40 (F4)	C10-C40 (Total)	Acenaphthene	Naphthalene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	Pyrene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				20	20	50	50	100	100	100	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sample Type	Field ID	Date	Lab Report Number																							
Normal	SED02_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED02_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Field_D	FD02	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<20	<20	<50	<50	<100	<100	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

RPD results summary

																						PFAS			
				Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ calc (Zero)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)
				mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
EQL				0.5	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2	1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
Sample Type	Field ID	Date	Lab Report Number																								
Normal	SED02_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Field_D	FD01	27 Feb 2025	1193807	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
RPD				-	-	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED02_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
RPD				-	-	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Field_D	FD02	27 Feb 2025	1193807	1.2	0.6	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**0**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Field_D	FD03	27 Feb 2025	1193807	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
RPD				-	-	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED05_0.5	27 Feb 2025	1193807	1.2	0.6	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<5
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5
RPD				-	-	-	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

RPD results summary

				10:2 Fluorotelomer sulfonic acid (10:2 FTS)	N-ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	N-ethyl perfluorooctane sulfonamidoethanol (NEtFOSE)	Perfluorooctane sulfonamide (PFOSA)	N-methyl perfluorooctane sulfonamide (NMeFOSA)	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (N-MeFOSE)	Sum of PFAS	Sum of PFHxS and PFOS	Perfluorononanesulfonic acid (PFNS)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of WA DWER PFAS (n=10)*	chlordane	d-BHC	DDT	Heptachlor epoxide	DDD	Methoxychlor	DDT+DDE+DDD	Dieldrin
				µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.5	0.5	0.2	0.5	0.2	0.5	0.2	0.5	0.2	0.2	0.2	0.5	5	5	0.2	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Sample Type	Field ID	Date	Lab Report Number																							
Normal	SED02_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Field_D	FD01	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Normal	SED02_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Interlab_D	FT01	27 Feb 2025	EB2509853	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	<0.5	-	-	<0.2	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Normal	SED04_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Field_D	FD02	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
RPD				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Normal	SED05_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Field_D	FD03	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	-	-	<5	<5	<5	-	-	-	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Normal	SED05_0.5	27 Feb 2025	1193807	<5	<5	<10	<5	<5	<5	<10	<5	<50	<5	<5	<5	<5	<5	<10	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Interlab_D	FT03	27 Feb 2025	EB2509853	<0.5	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.5	<0.2	<0.2	<0.2	<0.5	-	-	<0.2	-	-	-	-	-	-	-	-
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**0**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

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***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

RPD results summary

				Organochlorine Pesticides															Organophosphorus Pesticides							
				Endrin	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	Endrin ketone	g-BHC (Lindane)	b-BHC	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin aldehyde	Heptachlor	Azinophos methyl	Chlorfenvinphos	Chlorpyrifos-methyl	Chlorpyrifos	Diazinon	Dichlorvos	Dimethoate	Ethion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sample Type	Field ID	Date	Lab Report Number																							
Normal	SED02_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED02_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD02	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.05	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

RPD results summary

				Organophosphorous Pesticides																	
				Disulfoton	EPN	Ethoprop	Fenitrothion	Merphos	Bolstar (Sulprofos)	Coumaphos	Demeton-O	Demeton-S	Fensulfothion	Mevinphos (Phosdrin)	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2
Sample Type	Field ID	Date	Lab Report Number																		
Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD02	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

RPD results summary

								PCBs								Halogenated Benzenes	Organotins			
				Tetrachlorvinphos	Tokuthion	Pirimiphos-methyl	Fenthion	Malathion	Monocrotophos	PCBs (Sum of total)	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Hexachlorobenzene	Tributyltin	Tributyltin as SN_	Tributyltin oxide (TBTO)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.2	0.2	0.2	0.2	2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.05	1.25	0.5	1.25
Sample Type	Field ID	Date	Lab Report Number																		
Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Field_D	FD01	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED02_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Interlab_D	FT01	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Field_D	FD02	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	-	-	-
RPD				**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**-**	**-**
Normal	SED04_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Interlab_D	FT02	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Field_D	FD03	27 Feb 2025	1193807	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Normal	SED05_0.5	27 Feb 2025	1193807	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<1.25	<0.5	<1.25
Interlab_D	FT03	27 Feb 2025	EB2509853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**Elevated RPDs are highlighted as per QAQC Profile settings (Acceptable RPDs for each EQL multiplier range are: 30 (1 - 10

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row h

Appendix E QA/QC validation summary

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

Quality Assurance and Quality Control

The data validation process is used to assess the usability of the data collected and ensures that only representative and reliable data meeting the specified requirements is considered in the assessment.

The QA/QC process was conducted in accordance with the following guidance:

- Department of the Environment, Water, Heritage and Arts, National Assessment Guidelines for Dredging 2009 (NAGD, 2009).
- National Acid Sulfate Soils Guideline: Guidelines for the dredging of acid sulfate soil sediments and associated dredge spoil management (NASSG) (Commonwealth of Australia, 2018).
- National Environment Protection Council (NEPC) (1999) National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013. Referred to as ASC NEPM.
- NSW EPA (2020) Consultants Reporting on Contaminated Land – Contaminated Land Guidelines.
- PFAS National Environmental Management Plan (PFAS NEMP) (V3.0) (Heads of EPA Australia and New Zealand 2025).

The principal assessment measures, referred to as Data Quality Indicators (DQIs), are precision, accuracy or bias, representativeness, completeness and comparability (PARCC parameters). A summary of the conformance of the sampling program to the data validation process is summarised in **Table 1**.

Table 1 Summary of QAQC Conformance

Data quality indicator	Within compliance	Comments
Precision		
Laboratory duplicate relative percentage differences (RPDs) within limits prescribed by the laboratory.	No	A single laboratory duplicate RPDs was exceeded for PFOS reported from an anonymous sample which are not part of this investigation. Due to the single exceedance, PFOS was detected below laboratory LOR and exceedance relating to an anonymous sample, the dataset as a whole was considered representative and reliable by the laboratory, and therefore not re-run.
Field duplicate RPDs within criteria.	Yes	In accordance with AS4482.1 (2005), RPD results ≥50% were considered to exceed the data quality objectives (DQO) of the assessment. However, RDP results are discounted if both sample results used to calculate the RPD were below the

Data quality indicator	Within compliance	Comments
		laboratory's limit of reporting (LOR) or less than 5 times the LOR. Based on the above, a single RDP exceedance in sediment was identified for zinc, by the following samples: • SED04_0.5 and FD02 – RPD 56%. A detailed summary of RDP results is presented in Appendix D. As a result of the minimal RPD exceedances, the dataset as a whole is considered representative and reliable to inform investigation conclusions and recommendations, despite minor RPD non-compliance.
Appropriate number of field duplicates collected.	Yes	Two pairs of intra and inter-laboratory field duplicate samples were collected for PFAS analysis and a single pair of intra and inter-laboratory field duplicate samples were collected for other CoPC, including ASS.
Accuracy		
Trip, field and rinsate blank results below limit of reporting (LOR).	Yes	Trip blank was below LOR. No rinsate sample was collected for the investigation.
Decontamination procedures carried out between sampling events.	Yes	-
Field instrument calibrations undertaken and passed.	Yes	-
Laboratory method blanks reported within limits prescribed by the laboratory.	Yes	-
Laboratory control spike recoveries reported within limits prescribed by the laboratory.	Yes	-
Matrix spike sample results reported within limits prescribed by the laboratory.	No	Matrix spike soil sample concentrations were outside of the laboratory's prescribed range for analytes including PFHxS, PFHpS, PFOS, PFHxA and PFOA.

Data quality indicator	Within compliance	Comments
		All matrix spike non-compliance were reported from anonymous samples which are not part of this investigation. As a result, the matrix spike exceedances have not altered the investigation conclusions and recommendations.
Surrogate spike sample results reported within limits prescribed by the laboratory.	Yes	-
Representativeness		
Samples delivered to laboratory within sample holding times, chilled and with correct preservative.	Yes	-
All analyses NATA accredited.	Yes	-
SLR Standard Operating Procedures (SOP) followed.	Yes	-
Comparability		
Same SOPs applied during each sampling event.	Yes	-
Qualified sampler.	Yes	Supervisor: Robbie Johns (SQP & CENVP – site contamination) Sampler: Jackson Lodge (Experienced environmental scientist)
Climatic conditions suitable.	Yes	-
Same laboratory, type of sample preservation and analysis techniques	Yes	-
LORs below the adopted assessment criteria.	Yes	-
Completeness		
All critical locations sampled.	Yes	-
All required samples analysed and for the correct CoPC.	Yes	-

Data quality indicator	Within compliance	Comments
All laboratory data reviewed and presented in this report (i.e. COCs, SRNs, COAs and QCRs).	Yes	-
All sample results reported.	Yes	-
The sampling program was completed in accordance with the SAP.	Yes	-

Appendix F Laboratory certificates

Nelly Bay Harbour Maintenance Dredging

Sediment Investigation Report

Townsville City Council

SLR Project No.: 623.030475.00005

4 April 2025

CHAIN OF CUSTODY RECORD

Sydney Laboratory | ☑ Brisbane Laboratory | ☐ Perth Laboratory | ☐ Melbourne Laboratory

Company	SLR Consulting	Project №	623.030475	Project Manager	PH
Address	Level 16/175 Eagle St, Brisbane City QLD 4000	Project Name	Nelly Bay Sediment Investigation	EDD Format	Esdat
				Facility Code	
Contact Name	Prakash H	Sampler(s)	Jackson L	Handed over by	JL
Phone №	(+61) 481 510 038	Email for Invoice	accountspayableau@slrconsulting.com Prakash Hewavitharana@slrconsulting.com	Email for Results	Prakash.Hewavitharana@slrconsulting.com
Special Directions	Adopt sample IDs are per COC				
Purchase Order	030475				
Quote ID №	QLD-25-0001-SLR				

Required Turnaround Time (TAT)

- ☐ Overnight (reporting ...)
- ☐ Same day ♦ ☐ ...
- ☐ 2 days ♦ ☐ ...
- ☑ 5 days (Standard)
- ☐ Other

№	Client Sample ID	Sampled Date/Time	Matrix	S4 - ASS pH Field and pH Fox	B10B - TRH/BTEX/PAH/PCB/OC/OP/OPP/M8	Ag & Sb - metals	PFAS(std full suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700a - TOC	V5 - Volatile TRH & BTEX	HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	ASS bag	Jar (PFAS HDPE)	Jar (Glass)	Sample Comments / Dangerous Goods Hazard Warning
1	SED02_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X											
2	SED03_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X											
3	SED03_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X											
4	SED03_2.0	27/2/25	Sediment	X	X	X	X	X	X	X	X											
5	FD01	27/2/25	Sediment				X															PFAS only
6	FT01	27/2/25	Sediment										X									On hold
7	SED04_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X											
8	SED04_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X											
9	FD02	27/2/25	Sediment	X	X	X																Glass jar only
10	FT02	27/2/25	Sediment										X									On hold

Add Rows | Total Counts

Method of Shipment	☐ Courier	☑ Hand Delivered	☐ Postal	Name	JL	Signature	[signature]	Date	28/2/25	Time 915
Laboratory Use Only — Received By	RYAN G	SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature	[signature]	Date	3/3	Time	900	Temperature 5°C
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature		Date		Time		Report №

1193807

CHAIN OF CUSTODY RECORD

Sydney Laboratory [ ] Brisbane Laboratory [x] Perth Laboratory [ ] Melbourne Laboratory

Company	SLR Consulting	Project №	623.030475
Address	Level 16/175 Eagle St, Brisbane City QLD 4000	Project Name	Nelly Bay Sediment Investigation
Contact Name	Prakash H	Project Manager	PH
Phone №	(+61) 461 510 038	EDD Format	Esdat
Special Directions	Adopt sample IDs are per COC	Facility Code	
Purchase Order	030475	Sampler(s)	Jackson L
Quote ID №	QLD-25-0001-SLR	Handed over by	JL
		Email for Invoice	accountspayableau@slrconsulting.com Prakash.Hewavitharana@slrconsulting.com
		Email for Results	Prakash.Hewavitharana@slrconsulting.com

Required Turnaround Time (TAT): [ ] Overnight [ ] Same day [ ] 2 days [x] 5 days (Standard) [ ] Other

Containers: 500mL Plastic, 250mL Plastic, 125mL Plastic, 200mL Amber Glass, 40mL VOA vial, ASS bag, Jar (PFAS HDPE), Jar (Glass)

№	Client Sample ID	Sampled Date/Time	Matrix	S4 - ASS pH Field and pH Fox	B10B - TRH/BTEXPAH/PCB/OCP/OPP/M8	Ag & Sb - metals	PFAS(std full suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700a - TOC	V5 - Volatile TRH & BTEX	HOLD	Sample Comments / Dangerous Goods Hazard Warning
1	SED05_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X			
2	SED05_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
3	FD03	27/2/25	Sediment				X							PFAS only
4	FT03	27/2/25	Sediment										X	On hold
5	SED06_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X			
6	SED06_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
7	SED06_2.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
8	SED06_3.0	27/2/25	Sediment										X	On hold
9														
10														

Add Rows — Total Counts

Method of Shipment	[ ] Courier [x] Hand Delivered [ ] Postal	Name	JL	Signature	[signature]
Date	28/2/25	Time	915		

Laboratory Use Only

Received By	RMAW	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	[signature]	Date	3/3	Time	900	Temperature	5°C
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	

CHAIN OF CUSTODY RECORD

☐ Sydney Laboratory ☑ Brisbane Laboratory ☐ Perth Laboratory ☐ Melbourne Laboratory

Company	SLR Consulting	Project No	623.030475	Project Manager	PH
Address	Level 16/175 Eagle St, Brisbane City QLD 4000	Project Name	Nelly Bay Sediment Investigation	EDD Format	Esdat
Contact Name	Prakash H			Facility Code	
Phone No	(+61) 401 510 038				
Special Directions	Adopt sample IDs are per COC				
Purchase Order	030475				
Quote ID No	QLD-25-0081-SLR				

Sampler(s)	Jackson L	
Handed over by	JL	
Email for Invoice	accountspayablesu@slrconsulting.com Prakash.Hewavitharana@slrconsulting.com	
Email for Results	Prakash.Hewavitharana@slrconsulting.com	

Analyses

No	Client Sample ID	Sampled Date/Time	Matrix	S4 - ASS pH Peroxide and pH Fox	B10S - TRH/BTEX/PAH/PCB/OCP/OPP/MB	Ag & Sb - metals	PFAS(Std full suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700s - TOC	V3 - Volatile TRH & BTEX	HOLD	Containers: 500mL Plastic	250mL Plastic	125mL Plastic	250mL Amber Glass	40mL VOA Vial	ASS bag	Jar (PFAS HDPE)	Jar (Glass)	Sample Comments / Dangerous Goods Hazard Warning
1	TB 01	27/12/25	Sediment									X										Trip Blank
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Required Turnaround Time (TAT) (days if not listed)

☐ Overnight (reporting next day)
☐ Same day ♦ ☐ 1 day ♦
☐ 2 days ♦ ☐ 3 days ♦
☐ 5 days (Standard)
☐ Other

Add Rows | Total Counts

Method of Shipment	☐ Courier	☑ Hand Delivered	☐ Postal	Name	JL	Signature		Date	29/12/25	Time	915
Laboratory Use Only	Received By	RY AW	SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature		Date	3/1	Time	900	Temperature	3°C
	Received By		SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature		Date		Time		Report No	

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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+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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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: SLR Consulting (Qld)
Contact name: Prakash Hewavitharana
Project name: NELLY BAY SEDIMENT INVESTIGATION
Project ID: 623.030475
Turnaround time: 7 Day
Date/Time received Mar 3, 2025 9:00 AM
Eurofins reference 1193807

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.
✓	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Please note: Two trip blanks were received, one has been placed on hold. The extra trip blank has been labeled 'TB01 EXTRA'

Contact

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

Zoe Flynn on phone : 0499 572 666 or by email: Zoe.Flynn@eurofinsanz.com

Results will be delivered electronically via email to Prakash Hewavitharana - prakash.hewavitharana@slrconsulting.com.

Note: A copy of these results will also be delivered to the general SLR Consulting (Qld) email address.

SLR CONSULTING
Level 2 15 Astor Terrace
Spring Hill
QLD 4000

Attention: **Prakash Hewavitharana**

Report **1193807-S**
Project name NELLY BAY SEDIMENT INVESTIGATION
Project ID 623.030475
Received Date Mar 03, 2025

Client Sample ID			**SED02_0.5**	**SED03_0.5**	**SED03_1.0**	**SED03_2.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B25-Ma0003578**	**B25-Ma0003579**	**B25-Ma0003580**	**B25-Ma0003581**
Date Sampled			**Feb 27, 2025**	**Feb 27, 2025**	**Feb 27, 2025**	**Feb 27, 2025**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	96
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	220
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	316
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	%	91	74	93	78
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SED02_0.5	SED03_0.5	SED03_1.0	SED03_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003578	B25-Ma0003579	B25-Ma0003580	B25-Ma0003581
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	97	99	105	110
p-Terphenyl-d14 (surr.)	1	%	124	117	119	119
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	N/A	N/A	N/A	N/A
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	123	98	94	115
Tetrachloro-m-xylene (surr.)	1	%	120	124	132	127
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			SED02_0.5	SED03_0.5	SED03_1.0	SED03_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003578	B25-Ma0003579	B25-Ma0003580	B25-Ma0003581
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	100	87	85	116
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	123	98	94	115
Tetrachloro-m-xylene (surr.)	1	%	120	124	132	127
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	240
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	150
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	390
Tributyltin (TBT)						
Tributyltin	1.25	mg/kg	< 1.25	< 1.25	< 1.25	< 1.25
Tributyltin as Sn	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tributyltin Oxide	1.25	mg/kg	< 1.25	< 1.25	< 1.25	< 1.25
Tripropyltin as Sn (surr.)	1	%	112	122	112	112
% Clay	2.5	%	7.0	< 2.5	< 2.5	8.0
% Sand*		%	49	20	55	53
% Silt*		%	40	40	40	40
Total Organic Carbon	0.1	%	3.9	1.8	1.3	2.1

Client Sample ID			SED02_0.5	SED03_0.5	SED03_1.0	SED03_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003578	B25-Ma0003579	B25-Ma0003580	B25-Ma0003581
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Particle Size by Sieve analysis*						
<63 Micron	0.1	% w/w	42	2.1	1.0	2.7
>2000 Micron	0.1	% w/w	15	30	18	22
1000-2000 Micron	0.1	% w/w	15	28	22	26
125-300 Micron	0.1	% w/w	6.6	9.4	12	8.9
300-500 Micron	0.1	% w/w	5.9	10	21	13
500-1000 Micron	0.1	% w/w	11	18	25	25
63-125 Micron	0.1	% w/w	4.8	1.7	1.0	2.4
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	< 10	< 10
Arsenic	2	mg/kg	4.7	< 2	< 2	2.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	< 5	< 5	7.7
Copper	5	mg/kg	26	< 5	< 5	8.6
Lead	5	mg/kg	13	< 5	< 5	7.3
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.1	< 5	< 5	< 5
Silver	2	mg/kg	< 2	< 2	< 2	< 2
Zinc	5	mg/kg	46	6.5	5.9	22
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	8.8	8.3	8.6	8.1
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	7.1	3.9	5.3	3.4
Reaction Ratings*[S05]	0	comment	4.0	4.0	4.0	4.0
Sample Properties						
% Moisture	1	%	35	17	19	41
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	54	64	66	54
13C5-PFPeA (surr.)	1	%	84	100	104	93
13C5-PFHxA (surr.)	1	%	75	86	84	76
13C4-PFHpA (surr.)	1	%	79	94	98	93
13C8-PFOA (surr.)	1	%	85	103	102	103
13C5-PFNA (surr.)	1	%	99	114	119	132
13C6-PFDA (surr.)	1	%	113	135	135	134
13C2-PFUnDA (surr.)	1	%	88	96	101	100
13C2-PFDoDA (surr.)	1	%	117	139	132	123
13C2-PFTeDA (surr.)	1	%	90	85	87	85

Client Sample ID			SED02_0.5	SED03_0.5	SED03_1.0	SED03_2.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003578	B25-Ma0003579	B25-Ma0003580	B25-Ma0003581
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	93	107	113	80
D3-N-MeFOSA (surr.)	1	%	62	73	79	63
D5-N-EtFOSA (surr.)	1	%	76	79	83	51
D7-N-MeFOSE (surr.)	1	%	53	64	82	53
D9-N-EtFOSE (surr.)	1	%	89	79	92	81
D5-N-EtFOSAA (surr.)	1	%	79	88	92	92
D3-N-MeFOSAA (surr.)	1	%	87	96	97	97
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	84	102	95	81
18O2-PFHxS (surr.)	1	%	87	101	106	102
13C8-PFOS (surr.)	1	%	100	113	110	113
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	77	84	92	104
13C2-6:2 FTSA (surr.)	1	%	60	62	78	80
13C2-8:2 FTSA (surr.)	1	%	74	J+187	78	J+228
13C2-10:2 FTSA (surr.)	1	%	86	102	104	104
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			FD01	SED04_0.5	SED04_1.0	FD02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003582	B25-Ma0003583	B25-Ma0003584	B25-Ma0003585
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	-	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	86	82	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	104	99	121
p-Terphenyl-d14 (surr.)	1	%	-	121	116	108
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

Client Sample ID			FD01	SED04_0.5	SED04_1.0	FD02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003582	B25-Ma0003583	B25-Ma0003584	B25-Ma0003585
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
b-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	N/A	N/A	n/a
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	88	90	135
Tetrachloro-m-xylene (surr.)	1	%	-	135	125	135
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			FD01	SED04_0.5	SED04_1.0	FD02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003582	B25-Ma0003583	B25-Ma0003584	B25-Ma0003585
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	87	82	103
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	88	90	135
Tetrachloro-m-xylene (surr.)	1	%	-	135	125	135
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
Tributyltin (TBT)						
Tributyltin	1.25	mg/kg	-	< 1.25	< 1.25	-
Tributyltin as Sn	0.5	mg/kg	-	< 0.5	< 0.5	-
Tributyltin Oxide	1.25	mg/kg	-	< 1.25	< 1.25	-
Tripropyltin as Sn (surr.)	1	%	-	102	109	-
% Clay	2.5	%	-	10	7.0	-
% Sand*		%	-	50	51	-
% Silt*		%	-	40	40	-
Total Organic Carbon	0.1	%	-	1.4	2.6	-
Particle Size by Sieve analysis*						
<63 Micron	0.1	% w/w	-	57	24	-
>2000 Micron	0.1	% w/w	-	4.1	9.3	-
1000-2000 Micron	0.1	% w/w	-	4.6	9.6	-
125-300 Micron	0.1	% w/w	-	14	24	-
300-500 Micron	0.1	% w/w	-	5.0	11	-
500-1000 Micron	0.1	% w/w	-	3.8	8.0	-
63-125 Micron	0.1	% w/w	-	11	14	-
Heavy Metals						
Antimony	10	mg/kg	-	< 10	< 10	< 10
Arsenic	2	mg/kg	-	2.3	3.3	< 2
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	6.1	7.8	9.4
Copper	5	mg/kg	-	5.7	9.8	13

Client Sample ID			FD01	SED04_0.5	SED04_1.0	FD02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003582	B25-Ma0003583	B25-Ma0003584	B25-Ma0003585
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Heavy Metals						
Lead	5	mg/kg	-	9.5	11	15
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	< 5	< 5	5.5
Silver	2	mg/kg	-	< 2	< 2	< 2
Zinc	5	mg/kg	-	22	29	39
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	8.9	8.5	8.4
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	6.8	6.9	6.8
Reaction Ratings*[S05]	0	comment	-	4.0	4.0	4.0
Sample Properties						
% Moisture	1	%	35	21	44	40
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	-
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	-
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	-
13C4-PFBA (surr.)	1	%	66	70	54	-
13C5-PFPeA (surr.)	1	%	80	114	84	-
13C5-PFHxA (surr.)	1	%	91	91	71	-
13C4-PFHpA (surr.)	1	%	88	101	82	-
13C8-PFOA (surr.)	1	%	97	99	90	-
13C5-PFNA (surr.)	1	%	111	121	106	-
13C6-PFDA (surr.)	1	%	134	136	126	-
13C2-PFUnDA (surr.)	1	%	116	105	93	-
13C2-PFDoDA (surr.)	1	%	125	136	120	-
13C2-PFTeDA (surr.)	1	%	107	90	87	-
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	-
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	-
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	-
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	-
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	-
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	-
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	-
13C8-FOSA (surr.)	1	%	100	115	99	-
D3-N-MeFOSA (surr.)	1	%	73	76	68	-
D5-N-EtFOSA (surr.)	1	%	85	93	65	-
D7-N-MeFOSE (surr.)	1	%	133	72	57	-

Client Sample ID			FD01	SED04_0.5	SED04_1.0	FD02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003582	B25-Ma0003583	B25-Ma0003584	B25-Ma0003585
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
D9-N-EtFOSE (surr.)	1	%	J+178	102	79	-
D5-N-EtFOSAA (surr.)	1	%	137	96	82	-
D3-N-MeFOSAA (surr.)	1	%	J+181	98	81	-
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)N11	5	ug/kg	< 5	< 5	< 5	-
Perfluorononanesulfonic acid (PFNS)N15	5	ug/kg	< 5	< 5	< 5	-
Perfluoropropanesulfonic acid (PFPrS)N15	5	ug/kg	< 5	< 5	< 5	-
Perfluoropentanesulfonic acid (PFPeS)N15	5	ug/kg	< 5	< 5	< 5	-
Perfluorohexanesulfonic acid (PFHxS)N11	5	ug/kg	< 5	< 5	< 5	-
Perfluoroheptanesulfonic acid (PFHpS)N15	5	ug/kg	< 5	< 5	< 5	-
Perfluorooctanesulfonic acid (PFOS)N11	5	ug/kg	< 5	< 5	< 5	-
Perfluorodecanesulfonic acid (PFDS)N15	5	ug/kg	< 5	< 5	< 5	-
13C3-PFBS (surr.)	1	%	116	108	89	-
18O2-PFHxS (surr.)	1	%	90	99	86	-
13C8-PFOS (surr.)	1	%	109	118	107	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)N11	5	ug/kg	< 5	< 5	< 5	-
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)N11	10	ug/kg	< 10	< 10	< 10	-
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)N11	5	ug/kg	< 5	< 5	< 5	-
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)N11	5	ug/kg	< 5	< 5	< 5	-
13C2-4:2 FTSA (surr.)	1	%	90	86	73	-
13C2-6:2 FTSA (surr.)	1	%	61	92	63	-
13C2-8:2 FTSA (surr.)	1	%	56	78	100	-
13C2-10:2 FTSA (surr.)	1	%	J+229	108	89	-
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	-
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	-
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	-
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	-

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	-	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	-	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	< 50

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	86	-	94
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50	-	< 50
TRH C6-C10	20	mg/kg	< 20	< 20	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	106	96	-	83
p-Terphenyl-d14 (surr.)	1	%	121	112	-	119
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Toxaphene	0.5	mg/kg	N/A	N/A	-	N/A
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	91	100	-	95
Tetrachloro-m-xylene (surr.)	1	%	123	122	-	121
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	-	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	-	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Omethoate	2	mg/kg	< 2	< 2	-	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
Triphenylphosphate (surr.)	1	%	81	84	-	79

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Dibutylchlorendate (surr.)	1	%	91	100	-	95
Tetrachloro-m-xylene (surr.)	1	%	123	122	-	121
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	-	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	< 100
Tributyltin (TBT)						
Tributyltin	1.25	mg/kg	< 1.25	< 1.25	-	< 1.25
Tributyltin as Sn	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Tributyltin Oxide	1.25	mg/kg	< 1.25	< 1.25	-	< 1.25
Tripropyltin as Sn (surr.)	1	%	117	115	-	115
% Clay	2.5	%	10	10	-	7.0
% Sand*		%	50	49	-	52
% Silt*		%	40	40	-	40
Total Organic Carbon	0.1	%	4.0	3.4	-	< 0.1
Particle Size by Sieve analysis*						
<63 Micron	0.1	% w/w	62	52	-	31
>2000 Micron	0.1	% w/w	4.8	7.2	-	3.4
1000-2000 Micron	0.1	% w/w	5.2	6.2	-	4.7
125-300 Micron	0.1	% w/w	12	11	-	25
300-500 Micron	0.1	% w/w	4.1	4.9	-	7.5
500-1000 Micron	0.1	% w/w	3.8	5.0	-	8.1
63-125 Micron	0.1	% w/w	8.1	13	-	21
Heavy Metals						
Antimony	10	mg/kg	< 10	< 10	-	< 10
Arsenic	2	mg/kg	5.0	4.9	-	5.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	< 0.4
Chromium	5	mg/kg	11	13	-	28
Copper	5	mg/kg	8.1	14	-	13
Lead	5	mg/kg	11	9.8	-	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Nickel	5	mg/kg	6.8	8.1	-	15
Silver	2	mg/kg	< 2	< 2	-	< 2
Zinc	5	mg/kg	28	32	-	43
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	8.5	8.6	-	8.4
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	7.8	7.5	-	7.8
Reaction Ratings*[S05]	0	comment	4.0	4.0	-	4.0

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Sample Properties						
% Moisture	1	%	37	42	40	47
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C4-PFBA (surr.)	1	%	62	53	52	63
13C5-PFPeA (surr.)	1	%	100	84	71	94
13C5-PFHxA (surr.)	1	%	85	77	74	84
13C4-PFHpA (surr.)	1	%	94	82	73	91
13C8-PFOA (surr.)	1	%	95	80	77	94
13C5-PFNA (surr.)	1	%	108	101	85	117
13C6-PFDA (surr.)	1	%	131	121	80	135
13C2-PFUnDA (surr.)	1	%	105	92	130	99
13C2-PFDoDA (surr.)	1	%	131	122	120	126
13C2-PFTeDA (surr.)	1	%	96	93	125	99
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	116	101	118	107
D3-N-MeFOSA (surr.)	1	%	76	71	88	72
D5-N-EtFOSA (surr.)	1	%	90	83	89	85
D7-N-MeFOSE (surr.)	1	%	67	63	107	71
D9-N-EtFOSE (surr.)	1	%	99	86	69	112
D5-N-EtFOSAA (surr.)	1	%	87	85	147	85
D3-N-MeFOSAA (surr.)	1	%	91	86	[J+]246	96
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5

Client Sample ID			SED05_0.5	SED05_1.0	FD03	SED06_0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B25-Ma0003586	B25-Ma0003587	B25-Ma0003588	B25-Ma0003589
Date Sampled			Feb 27, 2025	Feb 27, 2025	Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	100	89	95	106
18O2-PFHxS (surr.)	1	%	102	90	98	101
13C8-PFOS (surr.)	1	%	120	100	99	122
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	89	81	57	66
13C2-6:2 FTSA (surr.)	1	%	52	61	57	72
13C2-8:2 FTSA (surr.)	1	%	102	87	J-47	102
13C2-10:2 FTSA (surr.)	1	%	93	92	J+257	99
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	70	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50	< 50
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	105	76
p-Terphenyl-d14 (surr.)	1	%	124	119
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	N/A	N/A
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	%	100	94
Tetrachloro-m-xylene (surr.)	1	%	128	116

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	87	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	%	100	94
Tetrachloro-m-xylene (surr.)	1	%	128	116

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Tributyltin (TBT)				
Tributyltin	1.25	mg/kg	< 1.25	< 1.25
Tributyltin as Sn	0.5	mg/kg	< 0.5	< 0.5
Tributyltin Oxide	1.25	mg/kg	< 1.25	< 1.25
Tripropyltin as Sn (surr.)	1	%	112	110
% Clay	2.5	%	7.0	8.0
% Sand*		%	52	53
% Silt*		%	40	40
Total Organic Carbon	0.1	%	6.2	7.4
Particle Size by Sieve analysis*				
<63 Micron	0.1	% w/w	39	44
>2000 Micron	0.1	% w/w	1.7	1.3
1000-2000 Micron	0.1	% w/w	6.4	2.3
125-300 Micron	0.1	% w/w	16	16
300-500 Micron	0.1	% w/w	5.9	4.3
500-1000 Micron	0.1	% w/w	10	3.8
63-125 Micron	0.1	% w/w	21	28
Heavy Metals				
Antimony	10	mg/kg	< 10	< 10
Arsenic	2	mg/kg	4.6	3.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	18	14
Copper	5	mg/kg	8.4	8.1
Lead	5	mg/kg	11	9.6
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	9.3	8.7
Silver	2	mg/kg	< 2	< 2
Zinc	5	mg/kg	29	26
Acid Sulfate Soils Field pH Test				
pH-F (Field pH test)*	0.1	pH Units	8.5	8.3
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	7.6	7.4
Reaction Ratings*[S05]	0	comment	4.0	4.0
Sample Properties				
% Moisture	1	%	38	40
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5	< 5

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5	< 5
13C4-PFBA (surr.)	1	%	63	59
13C5-PFPeA (surr.)	1	%	97	96
13C5-PFHxA (surr.)	1	%	85	84
13C4-PFHpA (surr.)	1	%	91	89
13C8-PFOA (surr.)	1	%	95	92
13C5-PFNA (surr.)	1	%	112	110
13C6-PFDA (surr.)	1	%	132	134
13C2-PFUnDA (surr.)	1	%	103	93
13C2-PFDoDA (surr.)	1	%	137	123
13C2-PFTeDA (surr.)	1	%	92	104
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10
13C8-FOSA (surr.)	1	%	101	101
D3-N-MeFOSA (surr.)	1	%	72	76
D5-N-EtFOSA (surr.)	1	%	85	81
D7-N-MeFOSE (surr.)	1	%	57	70
D9-N-EtFOSE (surr.)	1	%	101	89
D5-N-EtFOSAA (surr.)	1	%	87	86
D3-N-MeFOSAA (surr.)	1	%	91	86
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5
13C3-PFBS (surr.)	1	%	88	88
18O2-PFHxS (surr.)	1	%	94	102
13C8-PFOS (surr.)	1	%	118	112

Client Sample ID			SED06_1.0	SED06_2.0
Sample Matrix			Soil	Soil
Eurofins Sample No.			B25-Ma0003590	B25-Ma0003591
Date Sampled			Feb 27, 2025	Feb 27, 2025
Test/Reference	LOR	Unit		
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5	< 5
13C2-4:2 FTSA (surr.)	1	%	94	89
13C2-6:2 FTSA (surr.)	1	%	96	58
13C2-8:2 FTSA (surr.)	1	%	94	84
13C2-10:2 FTSA (surr.)	1	%	98	95
PFASs Summations				
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50

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	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Brisbane	Mar 11, 2025	14 Days
- Method: USEPA SW846 8260			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2220 OCP and PCB in Soil and Water			
Organophosphorus Pesticides	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls	Brisbane	Mar 11, 2025	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Mar 11, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Brisbane	Mar 11, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Tributyltin (TBT)	Melbourne	Mar 06, 2025	14 Days
- Method: LTM-ORG-2400 Determination of organotins in solid & aqueous samples by LC-ICP-MS			
% Clay	Brisbane	Mar 14, 2025	14 Days
- Method: LTM-GEN-7040 Percentage clay, silt and sand by Hydrometer			
% Sand	Brisbane	Mar 14, 2025	N/A
- Method: LTM-GEN-7040			
% Silt	Brisbane	Mar 14, 2025	N/A
- Method: LTM-GEN-7040			
Total Organic Carbon	Melbourne	Mar 07, 2025	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Particle Size by Sieve analysis*	Melbourne	Mar 19, 2025	28 Days
- Method: LTM-INO-4460 Particle Size Distribution (Sieving)			
Heavy Metals	Brisbane	Mar 11, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Acid Sulfate Soils Field pH Test	Brisbane	Mar 11, 2025	7 Days
- Method: LTM-GEN-7060 Determination of field pH (pHF) and field pH peroxide (pHFOX) tests			
% Moisture	Brisbane	Mar 04, 2025	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Mar 18, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Mar 18, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Mar 18, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Mar 18, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Eurofins Environment Testing Australia Pty Ltd
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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	+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

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Auckland	Auckland (Focus)	Christchurch	Tauranga
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Penrose	Mount Wellington	Rolleston	Gate Pa
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: SLR Consulting (Qld)
Address: Level 2 15 Astor Terrace
Spring Hill
QLD 4000

Project Name: NELLY BAY SEDIMENT INVESTIGATION
Project ID: 623.030475

Order No.: 030475
Report #: 1193807
Phone: 07 3858 4800
Fax:

Received: Mar 3, 2025 9:00 AM
Due: Mar 12, 2025
Priority: 7 Day
Contact Name: Prakash Hewavitharana

Eurofins Analytical Services Manager : Zoe Flynn

Sample Detail						% Clay	% Sand*	% Silt*	Antimony	HOLD*	Silver	Total Organic Carbon	Particle Size by Sieve analysis*	Acid Sulfate Soils Field pH Test	Moisture Set	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)	Suite B10B:TRH/BTEXN/PAH/OCP/OPP/PCB/M8	Tributyltin (TBT)
Melbourne Laboratory - NATA # 1261 Site # 1254												X	X						X
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X	X	X	X			X	X	X	X	X	
External Laboratory																			
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**														
1	SED02_0.5	Feb 27, 2025		Soil	B25-Ma0003578	X	X	X	X		X	X	X	X	X		X	X	X
2	SED03_0.5	Feb 27, 2025		Soil	B25-Ma0003579	X	X	X	X		X	X	X	X	X		X	X	X
3	SED03_1.0	Feb 27, 2025		Soil	B25-Ma0003580	X	X	X	X		X	X	X	X	X		X	X	X
4	SED03_2.0	Feb 27, 2025		Soil	B25-Ma0003581	X	X	X	X		X	X	X	X	X		X	X	X
5	FD01	Feb 27, 2025		Soil	B25-Ma0003582										X		X		
6	SED04_0.5	Feb 27, 2025		Soil	B25-Ma0003583	X	X	X	X		X	X	X	X	X		X	X	X
7	SED04_1.0	Feb 27, 2025		Soil	B25-Ma0003584	X	X	X	X		X	X	X	X	X		X	X	X
8	FD02	Feb 27, 2025		Soil	B25-Ma0003585				X		X			X	X			X	
9	SED05_0.5	Feb 27, 2025		Soil	B25-Ma0003586	X	X	X	X		X	X	X	X	X		X	X	X
10	SED05_1.0	Feb 27, 2025		Soil	B25-Ma0003587	X	X	X	X		X	X	X	X	X		X	X	X
11	FD03	Feb 27, 2025		Soil	B25-Ma0003588										X		X		
12	SED06_0.5	Feb 27, 2025		Soil	B25-Ma0003589	X	X	X	X		X	X	X	X	X		X	X	X
13	SED06_1.0	Feb 27, 2025		Soil	B25-Ma0003590	X	X	X	X		X	X	X	X	X		X	X	X

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Sample Detail						% Clay	% Sand*	% Silt*	Antimony	HOLD*	Silver	Total Organic Carbon	Particle Size by Sieve analysis*	Acid Sulfate Soils Field pH Test	Moisture Set	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)	Suite B10B:TRH/BTEXN/PAH/OCP/OPP/PCB/M8	Tributyltin (TBT)
Melbourne Laboratory - NATA # 1261 Site # 1254												X	X						X
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X	X	X	X			X	X	X	X	X	
14	SED06_2.0	Feb 27, 2025		Soil	B25-Ma0003591	X	X	X	X		X	X	X	X	X		X	X	X
15	TB01	Feb 27, 2025		Trip Blank (liquid)	B25-Ma0003592											X			
16	FT01	Feb 27, 2025		Soil	B25-Ma0003593					X									
17	FT02	Feb 27, 2025		Soil	B25-Ma0003594					X									
18	FT03	Feb 27, 2025		Soil	B25-Ma0003595					X									
19	SED06_3.0	Feb 27, 2025		Soil	B25-Ma0003596					X									
20	TB01 EXTRA	Feb 27, 2025		Trip Blank (liquid)	B25-Ma0003597					X									
Test Counts						11	11	11	12	5	12	11	11	12	14	1	13	12	11

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	N/A			0.5	N/A	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Organic Carbon	%	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Antimony	mg/kg	< 10			10	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Silver	mg/kg	< 2			2	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	98			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	73			70-130	Pass	
Toluene	%	107			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	120			70-130	Pass	
Xylenes - Total*	%	120			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	95			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Anthracene	%	125			70-130	Pass	
Benzo(a)pyrene	%	100			70-130	Pass	
Benzo(b&j)fluoranthene	%	96			70-130	Pass	
Benzo(g.h.i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	118			70-130	Pass	
Chrysene	%	124			70-130	Pass	
Dibenz(a.h)anthracene	%	72			70-130	Pass	
Fluoranthene	%	114			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	105			70-130	Pass	
Phenanthrene	%	110			70-130	Pass	
Pyrene	%	118			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Chlorfenvinphos	%	127			70-130	Pass	
Dichlorvos	%	130			70-130	Pass	
Disulfoton	%	108			70-130	Pass	
EPN	%	101			70-130	Pass	
Ethyl parathion	%	122			70-130	Pass	
Fensulfothion	%	123			70-130	Pass	
Mevinphos	%	126			70-130	Pass	
Monocrotophos	%	126			70-130	Pass	
Naled	%	75			70-130	Pass	
Omethoate	%	130			70-130	Pass	
Phorate	%	121			70-130	Pass	
LCS - % Recovery							
Total Organic Carbon	%	96			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	101			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	99			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	91			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	110			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	92			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	127			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	128			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	126			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	121			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	99			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	97			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	97			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	126			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	104			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	84			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	96			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	94			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	80			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	90			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	78			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	99			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	103			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	115			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	132			50-150	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	90			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	125			70-130	Pass	
Acenaphthylene	%	126			70-130	Pass	
Benz(a)anthracene	%	121			70-130	Pass	
Fluorene	%	117			70-130	Pass	
Naphthalene	%	119			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	108			70-130	Pass	
4.4'-DDD	%	80			70-130	Pass	
4.4'-DDE	%	102			70-130	Pass	
4.4'-DDT	%	108			70-130	Pass	
a-HCH	%	117			70-130	Pass	
Aldrin	%	106			70-130	Pass	
b-HCH	%	107			70-130	Pass	
d-HCH	%	108			70-130	Pass	
Dieldrin	%	100			70-130	Pass	
Endosulfan I	%	115			70-130	Pass	
Endosulfan II	%	117			70-130	Pass	
Endosulfan sulphate	%	101			70-130	Pass	
Endrin	%	130			70-130	Pass	
Endrin aldehyde	%	104			70-130	Pass	
Endrin ketone	%	113			70-130	Pass	
g-HCH (Lindane)	%	112			70-130	Pass	
Heptachlor	%	119			70-130	Pass	
Heptachlor epoxide	%	107			70-130	Pass	
Hexachlorobenzene	%	93			70-130	Pass	
Methoxychlor	%	113			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Azinphos-methyl	%	108			70-130	Pass	
Bolstar	%	128			70-130	Pass	
Chlorpyrifos	%	121			70-130	Pass	
Chlorpyrifos-methyl	%	103			70-130	Pass	
Coumaphos	%	94			70-130	Pass	
Demeton-S	%	109			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Diazinon	%	113			70-130	Pass	
Dimethoate	%	128			70-130	Pass	
Ethion	%	118			70-130	Pass	
Ethoprop	%	122			70-130	Pass	
Fenitrothion	%	117			70-130	Pass	
Fenthion	%	103			70-130	Pass	
Malathion	%	111			70-130	Pass	
Merphos	%	85			70-130	Pass	
Methyl parathion	%	119			75-125	Pass	
Pirimiphos-methyl	%	105			70-130	Pass	
Pyrazophos	%	100			70-130	Pass	
Ronnel	%	112			70-130	Pass	
Terbufos	%	120			70-130	Pass	
Tetrachlorvinphos	%	130			70-130	Pass	
Tokuthion	%	114			70-130	Pass	
Trichloronate	%	107			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	91			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Antimony	%	94			80-120	Pass	
Arsenic	%	90			80-120	Pass	
Cadmium	%	92			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	92			80-120	Pass	
Lead	%	93			80-120	Pass	
Mercury	%	90			80-120	Pass	
Nickel	%	90			80-120	Pass	
Silver	%	93			80-120	Pass	
Zinc	%	89			80-120	Pass	
LCS - % Recovery							
% Clay	%	111			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	108			70-130	Pass	
Aroclor-1260	%	115			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	103			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	95			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	93			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	85			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	90			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	114			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	124			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	128			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	112			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	85			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	107			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	97			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	107			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	75			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	85			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	93			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	99			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	109			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	116			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	112			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	97			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	135			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	134			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	85			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	104			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	B25-Ma0010914	NCP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B25-Ma0010914	NCP	%	75			70-130	Pass	
Toluene	B25-Ma0010914	NCP	%	104			70-130	Pass	
Ethylbenzene	B25-Ma0010914	NCP	%	101			70-130	Pass	
m&p-Xylenes	B25-Ma0010914	NCP	%	101			70-130	Pass	
o-Xylene	B25-Ma0010914	NCP	%	102			70-130	Pass	
Xylenes - Total*	B25-Ma0010914	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	B25-Ma0010914	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	B25-Fe0072490	NCP	%	125			70-130	Pass	
Acenaphthylene	B25-Fe0072490	NCP	%	127			70-130	Pass	
Anthracene	B25-Ma0005277	NCP	%	126			70-130	Pass	
Benz(a)anthracene	B25-Fe0072490	NCP	%	112			70-130	Pass	
Benzo(a)pyrene	B25-Ma0005277	NCP	%	128			70-130	Pass	
Benzo(b&j)fluoranthene	B25-Fe0073393	NCP	%	113			70-130	Pass	
Benzo(g.h.i)perylene	B25-Fe0072490	NCP	%	109			70-130	Pass	
Benzo(k)fluoranthene	B25-Ma0005277	NCP	%	130			70-130	Pass	
Chrysene	B25-Ma0005277	NCP	%	130			70-130	Pass	
Dibenz(a.h)anthracene	B25-Fe0072490	NCP	%	103			70-130	Pass	
Fluoranthene	B25-Fe0073393	NCP	%	111			70-130	Pass	
Fluorene	B25-Fe0072490	NCP	%	120			70-130	Pass	
Indeno(1.2.3-cd)pyrene	B25-Ma0005277	NCP	%	121			70-130	Pass	
Naphthalene	B25-Fe0072490	NCP	%	118			70-130	Pass	
Phenanthrene	B25-Ma0005277	NCP	%	124			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	B25-Fe0073393	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
a-HCH	B25-Ma0005277	NCP	%	119			70-130	Pass	
Endosulfan I	B25-Ma0005277	NCP	%	117			70-130	Pass	
Endosulfan II	B25-Ma0005277	NCP	%	127			70-130	Pass	
Endrin	B25-Fe0053518	NCP	%	126			70-130	Pass	
Endrin ketone	B25-Ma0005277	NCP	%	125			70-130	Pass	
Heptachlor	B25-Fe0073393	NCP	%	129			70-130	Pass	
Methoxychlor	B25-Ma0005277	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Bolstar	B25-Fe0072490	NCP	%	117			70-130	Pass	
Chlorfenvinphos	B25-Fe0053518	NCP	%	119			70-130	Pass	
Chlorpyrifos	B25-Fe0072499	NCP	%	105			70-130	Pass	
Demeton-O	B25-Fe0032251	NCP	%	97			70-130	Pass	
Dichlorvos	B25-Fe0047648	NCP	%	121			70-130	Pass	
Dimethoate	B25-Fe0072490	NCP	%	124			70-130	Pass	
Disulfoton	B25-Fe0072499	NCP	%	86			70-130	Pass	
EPN	B25-Fe0072490	NCP	%	122			70-130	Pass	
Ethion	B25-Fe0059860	NCP	%	126			70-130	Pass	
Ethoprop	B25-Fe0072490	NCP	%	120			70-130	Pass	
Ethyl parathion	B25-Fe0072490	NCP	%	125			70-130	Pass	
Fenitrothion	B25-Fe0072490	NCP	%	116			70-130	Pass	
Fensulfothion	B25-Fe0072499	NCP	%	130			70-130	Pass	
Malathion	B25-Fe0072490	NCP	%	113			70-130	Pass	
Merphos	B25-Fe0072490	NCP	%	73			70-130	Pass	
Methyl parathion	B25-Fe0072490	NCP	%	114			70-130	Pass	
Mevinphos	B25-Fe0072499	NCP	%	130			70-130	Pass	
Monocrotophos	B25-Fe0072499	NCP	%	116			70-130	Pass	
Naled	B25-Fe0072490	NCP	%	89			70-130	Pass	
Omethoate	B25-Fe0058318	NCP	%	97			70-130	Pass	
Phorate	B25-Fe0073393	NCP	%	123			70-130	Pass	
Ronnel	B25-Fe0072490	NCP	%	120			70-130	Pass	
Terbufos	B25-Fe0072490	NCP	%	110			70-130	Pass	
Tetrachlorvinphos	B25-Fe0072490	NCP	%	127			70-130	Pass	
Trichloronate	B25-Fe0072490	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	B25-Ma0003579	CP	%	93			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B25-Ma0003579	CP	%	107			70-130	Pass	
Aroclor-1260	B25-Ma0003579	CP	%	117			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	B25-Ma0003579	CP	%	92			70-130	Pass	
Spike - % Recovery									
Tributyltin (TBT)				Result 1					
Tributyltin as Sn	B25-Ma0003589	CP	%	65			60-140	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B25-Ma0003589	CP	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0003589	CP	%	85			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanoic acid (PFHxA)	B25-Ma0003589	CP	%	90			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0003589	CP	%	82			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0003589	CP	%	83			50-150	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0003589	CP	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0003589	CP	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0003589	CP	%	94			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0003589	CP	%	109			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0003589	CP	%	117			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0003589	CP	%	111			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B25-Ma0003589	CP	%	75			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0003589	CP	%	102			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0003589	CP	%	80			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0003589	CP	%	98			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0003589	CP	%	53			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0003589	CP	%	75			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0003589	CP	%	94			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0003589	CP	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0003589	CP	%	108			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0003589	CP	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0003589	CP	%	101			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0003589	CP	%	107			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0003589	CP	%	106			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B25-Ma0003589	CP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0003589	CP	%	95			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0003589	CP	%	116			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0003589	CP	%	61			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0003589	CP	%	103			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0003589	CP	%	105			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	B25-Ma0003591	CP	%	88			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	B25-Ma0003591	CP	%	128			70-130	Pass	
4.4'-DDD	B25-Ma0003591	CP	%	95			70-130	Pass	
4.4'-DDE	B25-Ma0003591	CP	%	119			70-130	Pass	
4.4'-DDT	B25-Ma0003591	CP	%	127			70-130	Pass	
Aldrin	B25-Ma0003591	CP	%	124			70-130	Pass	
b-HCH	B25-Ma0003591	CP	%	124			70-130	Pass	
d-HCH	B25-Ma0003591	CP	%	125			70-130	Pass	
Dieldrin	B25-Ma0003591	CP	%	117			70-130	Pass	
Endosulfan sulphate	B25-Ma0003591	CP	%	116			70-130	Pass	
Endrin aldehyde	B25-Ma0003591	CP	%	100			70-130	Pass	
g-HCH (Lindane)	B25-Ma0003591	CP	%	130			70-130	Pass	
Heptachlor epoxide	B25-Ma0003591	CP	%	117			70-130	Pass	
Hexachlorobenzene	B25-Ma0003591	CP	%	109			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Azinphos-methyl	B25-Ma0003591	CP	%	116			70-130	Pass	
Chlorpyrifos-methyl	B25-Ma0003591	CP	%	121			70-130	Pass	
Coumaphos	B25-Ma0003591	CP	%	109			70-130	Pass	
Demeton-S	B25-Ma0003591	CP	%	121			70-130	Pass	
Diazinon	B25-Ma0003591	CP	%	130			70-130	Pass	
Fenthion	B25-Ma0003591	CP	%	121			70-130	Pass	
Pirimiphos-methyl	B25-Ma0003591	CP	%	122			70-130	Pass	
Pyrazophos	B25-Ma0003591	CP	%	127			70-130	Pass	
Tokuthion	B25-Ma0003591	CP	%	125			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	B25-Ma0003591	CP	%	87			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Antimony	B25-Ma0003591	CP	%	102			75-125	Pass	
Arsenic	B25-Ma0003591	CP	%	100			75-125	Pass	
Cadmium	B25-Ma0003591	CP	%	108			75-125	Pass	
Chromium	B25-Ma0003591	CP	%	109			75-125	Pass	
Copper	B25-Ma0003591	CP	%	100			75-125	Pass	
Lead	B25-Ma0003591	CP	%	107			75-125	Pass	
Mercury	B25-Ma0003591	CP	%	111			75-125	Pass	
Nickel	B25-Ma0003591	CP	%	101			75-125	Pass	
Silver	B25-Ma0003591	CP	%	102			75-125	Pass	
Zinc	B25-Ma0003591	CP	%	104			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0003579	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0003579	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0003579	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0003579	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	B25-Ma0003580	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B25-Ma0003580	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B25-Ma0003580	CP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B25-Ma0003580	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B25-Ma0003580	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	B25-Ma0003580	CP	mg/kg	N/A	N/A	N/A	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	B25-Ma0003580	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Ethion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B25-Ma0003580	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B25-Ma0003580	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B25-Ma0003580	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	B25-Ma0003580	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B25-Ma0003580	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B25-Ma0003580	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	B25-Ma0003580	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorooctanesulfonic acid (PFOS)	B25-Ma0003041	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Total Organic Carbon	B25-Ma0003584	CP	%	2.6	2.4	5.8	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	B25-Ma0003584	CP	pH Units	8.5	8.5	pass	20%	Pass	
Duplicate									
Tributyltin (TBT)				Result 1	Result 2	RPD			
Tributyltin	B25-Ma0003586	CP	mg/kg	< 1.25	< 1.25	<1	30%	Pass	
Tributyltin as Sn	B25-Ma0003586	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tributyltin Oxide	B25-Ma0003586	CP	mg/kg	< 1.25	< 1.25	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B25-Ma0003587	CP	%	42	42	1.0	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0003588	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0003588	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0003588	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0003588	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	B25-Ma0003589	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	B25-Ma0003589	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B25-Ma0003589	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B25-Ma0003589	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	B25-Ma0003589	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	B25-Ma0003589	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B25-Ma0003589	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Hexachlorobenzene	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B25-Ma0003589	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	B25-Ma0003589	CP	mg/kg	N/A	N/A	N/A	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	B25-Ma0003589	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B25-Ma0003589	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B25-Ma0003589	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B25-Ma0003589	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B25-Ma0003589	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B25-Ma0003589	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	B25-Ma0003589	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
				Result 1	Result 2	RPD			
% Clay	B25-Ma0003589	CP	%	7.0	7.0	<1	30%	Pass	
% Sand*	B25-Ma0003589	CP	%	52	52	<1	30%	Pass	
% Silt*	B25-Ma0003589	CP	%	40	40	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Antimony	B25-Ma0003589	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	B25-Ma0003589	CP	mg/kg	5.5	5.0	10	30%	Pass	
Cadmium	B25-Ma0003589	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	B25-Ma0003589	CP	mg/kg	28	22	27	30%	Pass	
Copper	B25-Ma0003589	CP	mg/kg	13	12	14	30%	Pass	
Lead	B25-Ma0003589	CP	mg/kg	15	13	13	30%	Pass	
Mercury	B25-Ma0003589	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B25-Ma0003589	CP	mg/kg	15	12	20	30%	Pass	
Silver	B25-Ma0003589	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Zinc	B25-Ma0003589	CP	mg/kg	43	37	15	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Clay	B25-Ma0003590	CP	%	7.0	7.0	<1	30%	Pass	
% Sand*	B25-Ma0003590	CP	%	52	52	<1	30%	Pass	
% Silt*	B25-Ma0003590	CP	%	40	40	<1	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	B25-Ma0003591	CP	pH Units	8.3	8.3	pass	20%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0003591	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0003591	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0003591	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0003591	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	Yes

Qualifier Codes/Comments

Code	Description
J-	If the percent recoveries were less than the lower control limit, qualify detects for the analyte in associated samples as estimated with a negative bias J-.
J+	If the percent recoveries were greater than the upper control limit, qualify detects for the analyte in associated samples as estimated with a positive bias J+.
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
S05	Field Screen uses the following fizz rating to classify the rate the samples reacted to the peroxide: 1.0; No reaction to slight. 2.0; Moderate reaction. 3.0; Strong reaction with persistent froth. 4.0; Extreme reaction.

Authorised by:

Zoe Flynn	Analytical Services Manager
Angelique Lang-Frey	Senior Analyst-Metal
Angelique Lang-Frey	Senior Analyst-Organic
Angelique Lang-Frey	Senior Analyst-Volatile
Carroll Lee	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Inorganic
Jonathon Angell	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-PFAS
Jonathon Angell	Senior Analyst-Sample Properties
Jonathon Angell	Senior Analyst-SPOCAS
Jonathon Angell	Senior Analyst-Volatile
Luke Holt	Senior Analyst-Inorganic
Mary Makarios	Senior Analyst-Inorganic
Sarah Wallace	Senior Analyst-PFAS

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 | Environment Testing

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Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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	+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

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: SLR Consulting (Qld)
Contact name: Prakash Hewavitharana
Project name: NELLY BAY SEDIMENT INVESTIGATION
Project ID: 623.030475
Turnaround time: 5 Day
Date/Time received Mar 12, 2025 6:31 PM
Eurofins reference 1197082

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

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

Contact

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

Zoe Flynn on phone : 0499 572 666 or by email: Zoe.Flynn@eurofinsanz.com

Results will be delivered electronically via email to Prakash Hewavitharana - prakash.hewavitharana@slrconsulting.com.

Note: A copy of these results will also be delivered to the general SLR Consulting (Qld) email address.

Global Leader - Results you can trust

SLR CONSULTING
Level 2 15 Astor Terrace
Spring Hill
QLD 4000

NATA Accredited
Accreditation Number 1261
Site Number 20794 & 2780

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: **Prakash Hewavitharana**

Report **1197082-S**
Project name NELLY BAY SEDIMENT INVESTIGATION
Project ID 623.030475
Received Date Mar 12, 2025

Client Sample ID			**SED06_3.0**
Sample Matrix			**Soil**
Eurofins Sample No.			**B25-Ma0026593**
Date Sampled			**Feb 27, 2025**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH >C10-C16 less Naphthalene (F2)*[N01]	50	mg/kg	< 50
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5

Client Sample ID			SED06_3.0
Sample Matrix			Soil
Eurofins Sample No.			B25-Ma0026593
Date Sampled			Feb 27, 2025
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	118
p-Terphenyl-d14 (surr.)	1	%	130
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-HCH	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-HCH	0.05	mg/kg	< 0.05
d-HCH	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	0.5	mg/kg	N/A
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	129
Tetrachloro-m-xylene (surr.)	1	%	INT
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2

Client Sample ID			SED06_3.0
Sample Matrix			Soil
Eurofins Sample No.			B25-Ma0026593
Date Sampled			Feb 27, 2025
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	85
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	129
Tetrachloro-m-xylene (surr.)	1	%	INT
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
TRH >C10-C16	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Heavy Metals			
Antimony	10	mg/kg	< 10
Arsenic	2	mg/kg	7.7
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	23
Copper	5	mg/kg	17
Lead	5	mg/kg	10
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	10
Silver	2	mg/kg	< 2
Zinc	5	mg/kg	33

Client Sample ID			SED06_3.0
Sample Matrix			Soil
Eurofins Sample No.			B25-Ma0026593
Date Sampled			Feb 27, 2025
Test/Reference	LOR	Unit	
Sample Properties			
% Moisture	1	%	37
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	51
13C5-PFPeA (surr.)	1	%	73
13C5-PFHxA (surr.)	1	%	74
13C4-PFHpA (surr.)	1	%	64
13C8-PFOA (surr.)	1	%	65
13C5-PFNA (surr.)	1	%	109
13C6-PFDA (surr.)	1	%	92
13C2-PFUnDA (surr.)	1	%	135
13C2-PFDoDA (surr.)	1	%	129
13C2-PFTeDA (surr.)	1	%	83
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)[N11]	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)[N11]	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	100
D3-N-MeFOSA (surr.)	1	%	104
D5-N-EtFOSA (surr.)	1	%	113
D7-N-MeFOSE (surr.)	1	%	123
D9-N-EtFOSE (surr.)	1	%	77
D5-N-EtFOSAA (surr.)	1	%	[J+]153
D3-N-MeFOSAA (surr.)	1	%	[J+]205
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5

Client Sample ID			SED06_3.0
Sample Matrix			Soil
Eurofins Sample No.			B25-Ma0026593
Date Sampled			Feb 27, 2025
Test/Reference	LOR	Unit	
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	79
18O2-PFHxS (surr.)	1	%	122
13C8-PFOS (surr.)	1	%	116
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)[N11]	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5
13C2-4:2 FTSA (surr.)	1	%	74
13C2-6:2 FTSA (surr.)	1	%	117
13C2-8:2 FTSA (surr.)	1	%	61
13C2-10:2 FTSA (surr.)	1	%	[J+]201
PFASs Summations			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50

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	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Brisbane	Mar 17, 2025	14 Days
- Method: USEPA SW846 8260			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2220 OCP and PCB in Soil and Water			
Organophosphorus Pesticides	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Mar 17, 2025	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Heavy Metals	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Brisbane	Mar 12, 2025	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Mar 17, 2025	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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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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Project Name: NELLY BAY SEDIMENT INVESTIGATION
Project ID: 623.030475

Order No.: /030475
Report #: 1197082
Phone: 07 3858 4800
Fax:

Received: Mar 12, 2025 6:31 PM
Due: Mar 20, 2025
Priority: 5 Day
Contact Name: Prakash Hewavitharana

Eurofins Analytical Services Manager : Zoe Flynn

Sample Detail						Antimony	Silver	Moisture Set	Per- and Polyfluoroalkyl Substances (PFASs)	Suite B10B:TRH/BTEXN/PAH/OCP/OPP/PCB/M8
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X	X	X	X
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	SED06_3.0	Feb 27, 2025		Soil	B25-Ma0026593	X	X	X	X	X
Test Counts						1	1	1	1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	N/A			0.5	N/A	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Heavy Metals							
Antimony	mg/kg	< 10			10	Pass	
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	
Silver	mg/kg	< 2			2	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	79			70-130	Pass	
TRH C10-C14	%	93			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	116			70-130	Pass	
Toluene	%	124			70-130	Pass	
Ethylbenzene	%	118			70-130	Pass	
m&p-Xylenes	%	112			70-130	Pass	
Xylenes - Total*	%	112			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	75			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	113			70-130	Pass	
Acenaphthylene	%	104			70-130	Pass	
Anthracene	%	119			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	101			70-130	Pass	
Benzo(b&j)fluoranthene	%	82			70-130	Pass	
Benzo(g.h.i)perylene	%	84			70-130	Pass	
Benzo(k)fluoranthene	%	127			70-130	Pass	
Chrysene	%	119			70-130	Pass	
Dibenz(a.h)anthracene	%	101			70-130	Pass	
Fluoranthene	%	113			70-130	Pass	
Fluorene	%	95			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	123			70-130	Pass	
Naphthalene	%	111			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	116			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	118			70-130	Pass	
4.4'-DDD	%	92			70-130	Pass	
4.4'-DDE	%	130			70-130	Pass	
4.4'-DDT	%	121			70-130	Pass	
a-HCH	%	127			70-130	Pass	
Aldrin	%	128			70-130	Pass	
b-HCH	%	127			70-130	Pass	
d-HCH	%	114			70-130	Pass	
Dieldrin	%	123			70-130	Pass	
Endosulfan I	%	117			70-130	Pass	
Endosulfan II	%	128			70-130	Pass	
Endosulfan sulphate	%	122			70-130	Pass	
Endrin	%	117			70-130	Pass	
Endrin aldehyde	%	130			70-130	Pass	
Endrin ketone	%	123			70-130	Pass	
g-HCH (Lindane)	%	119			70-130	Pass	
Heptachlor	%	121			70-130	Pass	
Heptachlor epoxide	%	110			70-130	Pass	
Hexachlorobenzene	%	110			70-130	Pass	
Methoxychlor	%	117			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organophosphorus Pesticides							
Bolstar	%	106			70-130	Pass	
Chlorfenvinphos	%	94			70-130	Pass	
Chlorpyrifos	%	127			70-130	Pass	
Chlorpyrifos-methyl	%	104			70-130	Pass	
Demeton-S	%	113			70-130	Pass	
Demeton-O	%	85			70-130	Pass	
Diazinon	%	116			70-130	Pass	
Dichlorvos	%	106			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Disulfoton	%	121			70-130	Pass	
EPN	%	100			70-130	Pass	
Ethion	%	99			70-130	Pass	
Ethoprop	%	124			70-130	Pass	
Ethyl parathion	%	119			70-130	Pass	
Fenitrothion	%	74			70-130	Pass	
Fensulfothion	%	104			70-130	Pass	
Fenthion	%	104			70-130	Pass	
Malathion	%	107			70-130	Pass	
Merphos	%	75			70-130	Pass	
Mevinphos	%	99			70-130	Pass	
Monocrotophos	%	71			70-130	Pass	
Naled	%	89			70-130	Pass	
Omethoate	%	121			70-130	Pass	
Phorate	%	83			70-130	Pass	
Pirimiphos-methyl	%	101			70-130	Pass	
Ronnel	%	110			70-130	Pass	
Terbufos	%	96			70-130	Pass	
Tetrachlorvinphos	%	89			70-130	Pass	
Tokuthion	%	88			70-130	Pass	
Trichloronate	%	116			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	73			70-130	Pass	
Aroclor-1260	%	71			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	93			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Antimony	%	100			80-120	Pass	
Arsenic	%	101			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	107			80-120	Pass	
Copper	%	101			80-120	Pass	
Lead	%	99			80-120	Pass	
Mercury	%	100			80-120	Pass	
Nickel	%	100			80-120	Pass	
Silver	%	101			80-120	Pass	
Zinc	%	86			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	91			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanoic acid (PFPeA)	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	97			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	109			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	117			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	110			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	91			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	93			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	111			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	%	95			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	%	136			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	99			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	82			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	97			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	80			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	108			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	98			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	97			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	112			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	98			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	B25-Ma0031162	NCP	%	70			70-130	Pass	
TRH C10-C14	B25-Ma0031162	NCP	%	75			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B25-Ma0031162	NCP	%	98			70-130	Pass	
Toluene	B25-Ma0031162	NCP	%	106			70-130	Pass	
Ethylbenzene	B25-Ma0031162	NCP	%	108			70-130	Pass	
m&p-Xylenes	B25-Ma0031162	NCP	%	94			70-130	Pass	
o-Xylene	B25-Ma0031162	NCP	%	90			70-130	Pass	
Xylenes - Total*	B25-Ma0031162	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	B25-Ma0031162	NCP	%	70			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthene	B25-Ma0031157	NCP	%	111			70-130	Pass	
Acenaphthylene	B25-Ma0031157	NCP	%	106			70-130	Pass	
Anthracene	B25-Ma0031157	NCP	%	110			70-130	Pass	
Benz(a)anthracene	B25-Ma0031157	NCP	%	94			70-130	Pass	
Benzo(a)pyrene	B25-Ma0031157	NCP	%	100			70-130	Pass	
Benzo(b&j)fluoranthene	B25-Ma0031157	NCP	%	88			70-130	Pass	
Benzo(g.h.i)perylene	B25-Ma0031157	NCP	%	96			70-130	Pass	
Benzo(k)fluoranthene	B25-Ma0031157	NCP	%	110			70-130	Pass	
Chrysene	B25-Ma0031157	NCP	%	114			70-130	Pass	
Dibenz(a.h)anthracene	B25-Ma0031157	NCP	%	121			70-130	Pass	
Fluoranthene	B25-Ma0031157	NCP	%	110			70-130	Pass	
Fluorene	B25-Ma0031157	NCP	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	B25-Ma0031157	NCP	%	125			70-130	Pass	
Naphthalene	B25-Ma0031157	NCP	%	111			70-130	Pass	
Phenanthrene	B25-Ma0031157	NCP	%	100			70-130	Pass	
Pyrene	B25-Ma0031157	NCP	%	114			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	B25-Ma0031157	NCP	%	115			70-130	Pass	
4.4'-DDD	B25-Ma0033921	NCP	%	92			70-130	Pass	
4.4'-DDE	B25-Ma0031157	NCP	%	127			70-130	Pass	
4.4'-DDT	B25-Ma0031157	NCP	%	98			70-130	Pass	
a-HCH	B25-Ma0031157	NCP	%	124			70-130	Pass	
Aldrin	B25-Ma0031157	NCP	%	127			70-130	Pass	
b-HCH	B25-Ma0031157	NCP	%	124			70-130	Pass	
d-HCH	B25-Ma0031157	NCP	%	104			70-130	Pass	
Dieldrin	B25-Ma0031157	NCP	%	126			70-130	Pass	
Endosulfan I	B25-Ma0031157	NCP	%	129			70-130	Pass	
Endosulfan II	B25-Ma0031157	NCP	%	125			70-130	Pass	
Endosulfan sulphate	B25-Ma0031157	NCP	%	112			70-130	Pass	
Endrin	B25-Ma0033907	NCP	%	82			70-130	Pass	
Endrin aldehyde	B25-Ma0033907	NCP	%	82			70-130	Pass	
Endrin ketone	B25-Ma0031157	NCP	%	128			70-130	Pass	
g-HCH (Lindane)	B25-Ma0031157	NCP	%	124			70-130	Pass	
Heptachlor	B25-Ma0031157	NCP	%	121			70-130	Pass	
Heptachlor epoxide	B25-Ma0031157	NCP	%	107			70-130	Pass	
Hexachlorobenzene	B25-Ma0031157	NCP	%	106			70-130	Pass	
Methoxychlor	B25-Ma0031157	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Azinphos-methyl	B25-Ma0031157	NCP	%	114			70-130	Pass	
Bolstar	B25-Ma0031157	NCP	%	113			70-130	Pass	
Chlorfenvinphos	B25-Ma0031157	NCP	%	107			70-130	Pass	
Chlorpyrifos	B25-Ma0031157	NCP	%	128			70-130	Pass	
Chlorpyrifos-methyl	B25-Ma0031157	NCP	%	106			70-130	Pass	
Coumaphos	B25-Ma0033907	NCP	%	73			70-130	Pass	
Demeton-S	B25-Ma0031157	NCP	%	115			70-130	Pass	
Demeton-O	B25-Ma0033907	NCP	%	75			70-130	Pass	
Diazinon	B25-Ma0033907	NCP	%	90			70-130	Pass	
Dichlorvos	B25-Ma0033907	NCP	%	100			70-130	Pass	
Dimethoate	B25-Ma0031157	NCP	%	94			70-130	Pass	
Disulfoton	B25-Ma0033907	NCP	%	97			70-130	Pass	
EPN	B25-Ma0031157	NCP	%	115			70-130	Pass	
Ethion	B25-Ma0031157	NCP	%	125			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethoprop	B25-Ma0031157	NCP	%	128			70-130	Pass	
Ethyl parathion	B25-Ma0031157	NCP	%	123			70-130	Pass	
Fenitrothion	B25-Ma0031157	NCP	%	81			70-130	Pass	
Fensulfothion	B25-Ma0031157	NCP	%	121			70-130	Pass	
Fenthion	B25-Ma0031157	NCP	%	116			70-130	Pass	
Malathion	B25-Ma0031157	NCP	%	117			70-130	Pass	
Methyl parathion	B25-Ma0032718	NCP	%	74			70-130	Pass	
Mevinphos	B25-Ma0031157	NCP	%	92			70-130	Pass	
Monocrotophos	B25-Ma0032718	NCP	%	74			70-130	Pass	
Naled	B25-Ma0020299	NCP	%	77			70-130	Pass	
Omethoate	B25-Ma0033921	NCP	%	112			70-130	Pass	
Phorate	B25-Ma0031157	NCP	%	91			70-130	Pass	
Pirimiphos-methyl	B25-Ma0031157	NCP	%	115			70-130	Pass	
Pyrazophos	B25-Ma0031157	NCP	%	109			70-130	Pass	
Ronnel	B25-Ma0031157	NCP	%	124			70-130	Pass	
Terbufos	B25-Ma0031157	NCP	%	106			70-130	Pass	
Tetrachlorvinphos	B25-Ma0031157	NCP	%	91			70-130	Pass	
Tokuthion	B25-Ma0031157	NCP	%	95			70-130	Pass	
Trichloronate	B25-Ma0031157	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B25-Ma0031162	NCP	%	79			70-130	Pass	
Aroclor-1260	B25-Ma0031162	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	B25-Ma0031162	NCP	%	76			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Antimony	B25-Ma0031162	NCP	%	88			75-125	Pass	
Arsenic	B25-Ma0031162	NCP	%	80			75-125	Pass	
Cadmium	B25-Ma0031162	NCP	%	97			75-125	Pass	
Chromium	B25-Ma0031153	NCP	%	106			75-125	Pass	
Copper	B25-Ma0031162	NCP	%	93			75-125	Pass	
Lead	B25-Ma0031162	NCP	%	103			75-125	Pass	
Mercury	B25-Ma0031162	NCP	%	100			75-125	Pass	
Nickel	B25-Ma0031162	NCP	%	102			75-125	Pass	
Silver	B25-Ma0031162	NCP	%	95			75-125	Pass	
Zinc	B25-Ma0031162	NCP	%	105			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B25-Ma0033438	NCP	%	103			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0033438	NCP	%	105			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B25-Ma0033438	NCP	%	130			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0033438	NCP	%	106			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0033438	NCP	%	123			50-150	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0033438	NCP	%	130			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0033438	NCP	%	108			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0033438	NCP	%	102			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0033438	NCP	%	143			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0033438	NCP	%	144			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0033438	NCP	%	144			50-150	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B25-Ma0033438	NCP	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0033438	NCP	%	106			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0033438	NCP	%	107			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0033438	NCP	%	91			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0033438	NCP	%	61			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0033438	NCP	%	115			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0033438	NCP	%	82			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0033438	NCP	%	109			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0033438	NCP	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0033438	NCP	%	134			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0033438	NCP	%	116			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0033438	NCP	%	124			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0033438	NCP	%	122			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B25-Ma0033438	NCP	%	112			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0033438	NCP	%	108			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0033438	NCP	%	120			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0033438	NCP	%	126			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0033438	NCP	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0033438	NCP	%	145			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	B25-Ma0031164	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	B25-Ma0031164	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B25-Ma0031164	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B25-Ma0031164	NCP	mg/kg	51	53	4.0	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	B25-Ma0031164	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	B25-Ma0031164	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B25-Ma0031164	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B25-Ma0031164	NCP	mg/kg	4.8	4.2	12	30%	Pass	
4.4'-DDT	B25-Ma0031164	NCP	mg/kg	< 0.05	0.06	12	30%	Pass	
a-HCH	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B25-Ma0031164	NCP	mg/kg	0.12	0.12	4.0	30%	Pass	
Endosulfan I	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B25-Ma0031164	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	B25-Ma0032727	NCP	mg/kg	n/a	n/a	n/a	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Coumaphos	B25-Ma0031164	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B25-Ma0031164	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B25-Ma0031164	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B25-Ma0031164	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	B25-Ma0032758	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B25-Ma0031164	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B25-Ma0031164	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	B25-Ma0031164	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Antimony	B25-Ma0031164	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Arsenic	B25-Ma0031164	NCP	mg/kg	200	190	5.0	30%	Pass	
Cadmium	B25-Ma0031164	NCP	mg/kg	1.4	1.5	11	30%	Pass	
Chromium	B25-Ma0031164	NCP	mg/kg	270	260	2.0	30%	Pass	
Copper	B25-Ma0031164	NCP	mg/kg	56	55	1.0	30%	Pass	
Lead	B25-Ma0031164	NCP	mg/kg	22	24	9.0	30%	Pass	
Mercury	B25-Ma0031164	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B25-Ma0031164	NCP	mg/kg	140	140	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Silver	B25-Ma0031164	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Zinc	B25-Ma0031164	NCP	mg/kg	560	580	3.0	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	L25-Ma0025901	NCP	%	82	78	5.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol(N-MeFOSE)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol(N-EtFOSE)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B25-Ma0026593	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B25-Ma0026593	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1	Result 2	RPD			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid(6:2 FTSA)	B25-Ma0026593	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B25-Ma0026593	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
J+	If the percent recoveries were greater than the upper control limit, qualify detects for the analyte in associated samples as estimated with a positive bias J+.
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised by:

Jacinta Baker	Analytical Services Manager
Jonathon Angell	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Sample Properties
Sarah Wallace	Senior Analyst-Organic
Sarah Wallace	Senior Analyst-PFAS
Sarah Wallace	Senior Analyst-Volatile

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

SLR CONSULTING
Level 2 15 Astor Terrace
Spring Hill
QLD 4000

Attention: **Prakash Hewavitharana**

Report **1201204-S**
Project name NELLY BAY SEDIMENT INVESTIGATION
Project ID 623.030475
Received Date Mar 24, 2025

Client Sample ID			**SED03_0.5**	**SED03_1.0**	**SED04_0.5**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B25-Ma0055289**	**B25-Ma0055308**	**B25-Ma0055309**
Date Sampled			**Feb 27, 2025**	**Feb 27, 2025**	**Feb 27, 2025**
Test/Reference	LOR	Unit			
Extraneous Material					
<2mm Fraction	0.005	g	110	11	96
>2mm Fraction	0.005	g	31	14	2.8
Analysed Material	0.1	%	77	44	97
Extraneous Material	0.1	%	23	56	2.8
Net Acidity (Excluding ANC)					
s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	0.02	% S	0.05	0.06	0.46
CRS Suite - Net Acidity - NASSG (Excluding ANC)	10	mol H+/t	31	40	290
CRS Suite - Liming Rate - NASSG (Excluding ANC)	1	kg CaCO3/t	2.3	3.0	22
Actual Acidity (NLM-3.2)					
pH-KCL (NLM-3.1)	0.1	pH Units	8.9	8.3	8.9
Titratable Actual Acidity (NLM-3.2)	2	mol H+/t	< 2	< 2	< 2
Titratable Actual Acidity (NLM-3.2)	0.003	% pyrite S	< 0.003	< 0.003	< 0.003
Potential Acidity - Chromium Reducible Sulfur					
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)[S04]	0.005	% S	0.049	0.065	0.46
Chromium Reducible Sulfur (a-SCr) (NLM-2.1)	3	mol H+/t	31	40	290
Extractable Sulfur					
Sulfur - KCl Extractable	0.005	% S	N/A	N/A	N/A
HCl Extractable Sulfur	0.005	% S	N/A	N/A	N/A
Retained Acidity (S-NAS)					
Net Acid soluble sulfur (SNAS) NLM-4.1	0.005	% S	N/A	N/A	N/A
Net Acid soluble sulfur (s-SNAS) NLM-4.1[S02]	0.005	% S	N/A	N/A	N/A
Net Acid soluble sulfur (a-SNAS) NLM-4.1	2	mol H+/t	N/A	N/A	N/A
HCl Extractable Sulfur Correction Factor	1	factor	2.0	2.0	2.0
Acid Neutralising Capacity (ANCbt)					
Acid Neutralising Capacity - (ANCbt) (NLM-5.2)	0.01	% CaCO3	0.27	0.26	22
Acid Neutralising Capacity - (s-ANCbt) (NLM-5.2)[S03]	0.02	% S	0.09	0.08	7.2
Acid Neutralising Capacity - (a-ANCbt) (NLM-5.2)	2	mol H+/t	54	52	4500
ANC Fineness Factor		factor	1.5	1.5	1.5
Net Acidity (Including ANC)					
s-CRS Suite - Net Acidity - NASSG (including ANC)	0.02	% S	< 0.02	< 0.02	< 0.02
CRS Suite - Net Acidity - NASSG (Including ANC)	10	mol H+/t	< 10	< 10	< 10
CRS Suite - Liming Rate - NASSG (Including ANC)[S01]	1	kg CaCO3/t	< 1	< 1	< 1
Sample Properties					
% Moisture	1	%	18	18	41

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
Extraneous Material	Brisbane	Mar 25, 2025	6 Week
- Method: LTM-GEN-7050/7070			
Chromium Suite - NASSG (Excluding ANC)	Brisbane	Mar 25, 2025	6 Week
- Method: LTM-GEN-7070 Chromium Reducible Sulfur Suite			
% Moisture	Brisbane	Mar 24, 2025	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins

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

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
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	+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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35 O'Rorke Road	Unit C1/4 Pacific Rise	43 Detroit Drive	1277 Cameron Road
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: SLR Consulting (Qld)
Address: Level 2 15 Astor Terrace
Spring Hill
QLD 4000

Project Name: NELLY BAY SEDIMENT INVESTIGATION
Project ID: 623.030475

Order No.: /030475
Report #: 1201204
Phone: 07 3858 4800
Fax:

Received: Mar 24, 2025 4:48 PM
Due: Mar 31, 2025
Priority: 5 Day
Contact Name: Prakash Hewavitharana

Eurofins Analytical Services Manager : Zoe Flynn

Sample Detail						Moisture Set	Chromium Suite - NASSG (Excluding ANC)
Brisbane Laboratory - NATA # 1261 Site # 20794 & 2780						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	SED03_0.5	Feb 27, 2025		Soil	B25-Ma0055289	X	X
2	SED03_1.0	Feb 27, 2025		Soil	B25-Ma0055308	X	X
3	SED04_0.5	Feb 27, 2025		Soil	B25-Ma0055309	X	X
Test Counts						3	3

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where moisture has been determined on a solid sample, the result is expressed on a dry weight basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples, these are performed on laboratory-certified clean sands and in the case of water samples, these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC represents the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment; however, free tributyltin was measured, and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 6.0
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

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

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

Results <10 times the LOR:	No Limit
Results between 10-20 times the LOR:	RPD must lie between 0-50%
Results >20 times the LOR:	RPD must lie between 0-30%

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

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

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

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Actual Acidity (NLM-3.2)							
pH-KCL (NLM-3.1)	%	99			80-120	Pass	
Titratable Actual Acidity (NLM-3.2)	%	96			80-120	Pass	
LCS - % Recovery							
Potential Acidity - Chromium Reducible Sulfur							
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)	%	104			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Net Acidity (Excluding ANC)				Result 1	Result 2	RPD			
s-CRS Suite - Net Acidity - NASSG (Excluding ANC)	M25-Ma0050943	NCP	% S	0.08	0.08	2.0	30%	Pass	
CRS Suite - Net Acidity - NASSG (Excluding ANC)	M25-Ma0050943	NCP	mol H+/t	50	49	2.0	20%	Pass	
CRS Suite - Liming Rate - NASSG (Excluding ANC)	M25-Ma0050943	NCP	kg CaCO3/t	3.8	3.7	2.0	30%	Pass	
Duplicate									
Actual Acidity (NLM-3.2)				Result 1	Result 2	RPD			
pH-KCL (NLM-3.1)	M25-Ma0050943	NCP	pH Units	9.1	9.1	<1	20%	Pass	
Titratable Actual Acidity (NLM-3.2)	M25-Ma0050943	NCP	mol H+/t	< 2	< 2	<1	20%	Pass	
Titratable Actual Acidity (NLM-3.2)	M25-Ma0050943	NCP	% pyrite S	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Potential Acidity - Chromium Reducible Sulfur				Result 1	Result 2	RPD			
Chromium Reducible Sulfur (s-SCr) (NLM-2.1)	M25-Ma0050943	NCP	% S	0.080	0.078	2.0	20%	Pass	
Chromium Reducible Sulfur (a-SCr) (NLM-2.1)	M25-Ma0050943	NCP	mol H+/t	50	49	2.0	30%	Pass	
Duplicate									
Extractable Sulfur				Result 1	Result 2	RPD			
Sulfur - KCl Extractable	M25-Ma0050943	NCP	% S	N/A	N/A	N/A	30%	Pass	
HCl Extractable Sulfur	M25-Ma0050943	NCP	% S	N/A	N/A	N/A	20%	Pass	
Duplicate									
Retained Acidity (S-NAS)				Result 1	Result 2	RPD			
Net Acid soluble sulfur (SNAS) NLM-4.1	M25-Ma0050943	NCP	% S	N/A	N/A	N/A	30%	Pass	
Net Acid soluble sulfur (s-SNAS) NLM-4.1	M25-Ma0050943	NCP	% S	N/A	N/A	N/A	30%	Pass	
Net Acid soluble sulfur (a-SNAS) NLM-4.1	M25-Ma0050943	NCP	mol H+/t	N/A	N/A	N/A	30%	Pass	
Duplicate									
Acid Neutralising Capacity (ANCbt)				Result 1	Result 2	RPD			
Acid Neutralising Capacity - (ANCbt) (NLM-5.2)	M25-Ma0050943	NCP	% CaCO3	1.2	1.1	17	20%	Pass	
Acid Neutralising Capacity - (s-ANCbt) (NLM-5.2)	M25-Ma0050943	NCP	% S	0.40	0.34	17	30%	Pass	
ANC Fineness Factor	M25-Ma0050943	NCP	factor	1.5	1.5	<1	30%	Pass	
Duplicate									
Net Acidity (Including ANC)				Result 1	Result 2	RPD			
s-CRS Suite - Net Acidity - NASSG (including ANC)	M25-Ma0050943	NCP	% S	< 0.02	< 0.02	<1	30%	Pass	
CRS Suite - Net Acidity - NASSG (Including ANC)	M25-Ma0050943	NCP	mol H+/t	< 10	< 10	<1	30%	Pass	
CRS Suite - Liming Rate - NASSG (Including ANC)	M25-Ma0050943	NCP	kg CaCO3/t	< 1	< 1	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B25-Ma0055308	CP	%	18	16	11	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
S01	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'
S02	Retained Acidity is Reported when the pHKCl is less than pH 4.5
S03	Acid Neutralising Capacity is only required if the pHKCl if greater than or equal to pH 6.5
S04	Acid Sulfate Soil Samples have a 24 hour holding time unless frozen or dried within that period

Authorised by:

Zoe Flynn	Analytical Services Manager
Jonathon Angell	Senior Analyst-Sample Properties
Jonathon Angell	Senior Analyst-SPOCAS

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.

Environmental Division
Brisbane
Work Order Reference
EB2509853

Telephone + 61-7-3552-8686

CHAIN OF CUSTODY RECORD

Sydney Laboratory | ☑ Brisbane Laboratory | ☐ Perth Laboratory | ☐ Melbourne Laboratory

Company	SLR Consulting
Address	Level 16/175 Eagle St, Brisbane City QLD 4000
Contact Name	Prakash H
Phone No	(+61) 481 510 035
Special Directions	Adopt sample IDs are per COC
Purchase Order	030475
Quote ID No	QLD-25-0001-SLR
Project No	623.030475
Project Name	Nelly Bay Sediment Investigation
Project Manager	PH
EDD Format	Esdat
Facility Code	
Sampler(s)	Jackson L
Handed over by	JL
Email for Invoice	accountspayableau@slrconsulting.com; Prakash.Hewavitharana@slrconsulting.com
Email for Results	Prakash.Hewavitharana@slr...

Required Turnaround Time (TAT): ☐ Overnight (reporting) ☐ Same day# ☐ 2 days# ☑ 5 days (Standard) ☐ Other

Containers: 500mL Plastic, 250mL Plastic, 125mL Plastic, 250mL Amber Glass, 40mL VOA vial, ASS bag, Jar (PFAS HDPE), Jar (Glass)

No	Client Sample ID	Sampled Date/Time	Matrix	S4- ASS pH Field and pH Fox	810B - TRH/BTEXPAH/PCB/OCP/OPP/MS	Ag & Sb - metals	PFAS(std list suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700a - TOC	V5 - Volatile TRH & BTEX	HOLD	Sample Comments / Dangerous Goods Hazard Warning
1	SED02_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X			
2	SED03_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X			
3	SED03_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
4	SED03_2.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
5	FD01	27/2/25	Sediment				X							PFAS only
6	FT01	27/2/25	Sediment										X	On hold
7	SED04_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X			
8	~~SED~~ SED04_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X			
9	FD02	27/2/25	Sediment	X	X	X								Glass jar only
10	FT02	27/2/25	Sediment										X	On hold

Add Rows | Total Counts

Method of Shipment: ☐ Courier ☑ Hand Deliver ☐ Postal | Name: JL | Signature: [signature] | Date: 28/2/25 | Time: 915

Laboratory Use Only: Received By: RYAN JG | PYO / BNE / SYD / PER / ADL / NTL / DRW | Signature: [signature] | Date: 3/3 | Time: 900 | Temperature: 5°C
Received By: | Signature: | Date: | Time: | Report No:

1 | 2

IK 2413 1616.

1193807

CHAIN OF CUSTODY RECORD

Sydney Laboratory · Brisbane Laboratory · Perth Laboratory · Melbourne Laboratory

Company	SLR Consulting
Address	Level 16/175 Eagle St, Brisbane City QLD 4000
Contact Name	Prakash H
Phone №	(+61) 461 510 038
Special Directions	Adopt sample IDs are per COC
Purchase Order	630475
Quote ID №	QLD-25-0001-SLR
Project №	623.030475
Project Name	Kelly Bay Sediment Investigation
Project Manager	PH
EDD Format	Esdat
Facility Code	
Sampler(s)	Jackson L
Handed over by	JL
Email for Invoice	accountspayable@slrconsulting.com Prakash.Hewavitharana@slrconsulting.com
Email for Results	Prakash.Hewavitharana@slrconsulting.com

Required Turnaround Time (TAT): ☐ Overnight (reporting ...) ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days ☑ 5 days (Standard) ☐ Other:

Containers: 500mL Plastic · 250mL Plastic · 125mL Plastic · 200mL Amber Glass · 40mL VOA vial · ASS bag · Jar (PFAS HDPE) · Jar (Glass)

No	Client Sample ID	Sampled Date/Time	Matrix	S4 - ASS pH Field and pH Fox	B15B - TRH/BTEXN/PAH/PCB/OC/OP/PMS	Ag & Sb - metals	PFAS(std full suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700a - TOC	V5 - Volatile TRH & BTEX		HOLD	Sample Comments / Dangerous Goods Hazard Warning
1	SED05_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X				
2	SED05_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X				
3	FD03	27/2/25	Sediment				X								PFAS only
4	FT03	27/2/25	Sediment											X	On hold
5	SED06_0.5	27/2/25	Sediment	X	X	X	X	X	X	X	X				
6	SED06_1.0	27/2/25	Sediment	X	X	X	X	X	X	X	X				
7	SED06_2.0	27/2/25	Sediment	X	X	X	X	X	X	X	X				
8	SED06_3.0	27/2/25	Sediment											X	On hold
9															
10															

Add Rows · Total Colours

Method of Shipment: ☐ Courier ☒ Hand Delivered ☐ Postal · Name: JL · Signature: [signature] · Date: 28/2/25 · Time: 915

Laboratory Use Only					
Received By	[signature]	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature: [signature]	Date: [illegible]	Time: 700 · Temperature: [illegible]
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time · Report No

CHAIN OF CUSTODY RECORD

Company	SLR Consulting	Project №	623.030475
Address	Level 16/175 Eagle St, Brisbane City QLD 4000	Project Name	Nelly Bay Sediment Investigation
Contact Name	Prakash H	Project Manager	PH
Phone №	(+61) 481 510 038	EDD Format	Esdat
Special Directions	Adopt sample IDs are per COC.	Facility Code	
Purchase Order	030475	Sampler(s)	Jackson L
Quote ID №	QLD-25-0081-SLR	Handed over by	JL
		Email for Invoice	accountspayable@slrconsulting.com Prakash.Hewavitharana@slrconsulting.com
		Email for Results	Prakash.Hewavitharana@slrconsulting.com

Required Turnaround Time (TAT): ☐ Overnight (reporting) ☐ Same day ☐ 2 days ☑ 5 days (Standard) ☐ Other

№	Client Sample ID	Sampled Date/Time	Matrix	S4 - ASS pH Field and pH Fox	B10B - TRH/BTEXPAH/PCB/OCP/OPP/AB	Ag & Sb - metals	PFAS (std list suite)	OT2 - TBT	Particle Size by Sieve analysis	Additional PSD - %Clay, %Silt and %Sand by Hydrometer	12700a - TOC	V5 - Volatile TRH & BTEX	HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	ASS bag	Jar (PFAS HDPE)	Jar (Glass)	Sample Comments / Dangerous Goods Hazard Warning
1	TB01	27/2/25	Sediment									X										Trip Blank
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Add Rows | Total Counts

Method of Shipment	☐ Courier	☒ Hand Delivered	☐ Postal	Name	JL	Signature	[signature]	Date	28/2/25	Time	915
Laboratory Use Only	Received By	[signature]	SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature	[signature]	Date	3/3	Time	900	Temperature	5°C
	Received By		SYD / BNE / MEL / PER / ADL / NTL / DRW	Signature		Date		Time		Report №	

CERTIFICATE OF ANALYSIS

Work Order	: **EB2509853**	Page	: 1 of 6
Client	: **SLR CONSULTING AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: PRAKASH HEWAVITHARANA	Contact	: Jarret Venderley
Address	: LEVEL 16 175 EAGLE STREET BRISBANE 4000	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61-7-3552-8685
Project	: 623.030475 - Nelly Bay Sediment Investigation	Date Samples Received	: 24-Mar-2025 16:16
Order number	: 030475	Date Analysis Commenced	: 25-Mar-2025
C-O-C number	: ----	Issue Date	: 30-Mar-2025 16:42
Sampler	: JACKSON L		
Site	: ----		
Quote number	: EN-000		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- 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*
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Soil Preparation, Stafford, QLD
Kirsty Watson	Senior Chemist - Organics	Brisbane Organics, 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.

- EP231X PFAS: Matrix spike recovery for sample EB2506293-022 is not determined due to dilution of primary sample.
- EP231X PFAS: Sample EB2506293-083 shows poor duplicate recovery due to heterogeneity. Confirmed by visual inspection.
- 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: SEDIMENT (Matrix: SOIL)			Sample ID	FT01	FT02	FT03	----	----
			Sampling date / time	27-Feb-2025 00:00	27-Feb-2025 00:00	27-Feb-2025 00:00	----	----
Compound	CAS Number	LOR	Unit	EB2509853-001	EB2509853-002	EB2509853-003	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	**37.2**	----	**38.9**	----	----
Moisture Content	----	1.0	%	----	**44.2**	----	----	----
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	----	**6**	----	----	----
Copper	7440-50-8	5	mg/kg	----	**15**	----	----	----
Lead	7439-92-1	5	mg/kg	----	**11**	----	----	----
Nickel	7440-02-0	2	mg/kg	----	**4**	----	----	----
Zinc	7440-66-6	5	mg/kg	----	**32**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	----	<0.1	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
ø Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	<0.0005	----	----
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	----	----
ø Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	<0.0002	----	----

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	FT01	FT02	FT03	----	----
				Sampling date / time	27-Feb-2025 00:00	27-Feb-2025 00:00	27-Feb-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2509853-001	EB2509853-002	EB2509853-003	--------	--------
					Result	Result	Result	----	----
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	----	----
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									

Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	FT01	FT02	FT03	----	----
				Sampling date / time	27-Feb-2025 00:00	27-Feb-2025 00:00	27-Feb-2025 00:00	----	----
Compound	CAS Number	LOR	Unit		EB2509853-001	EB2509853-002	EB2509853-003	--------	--------
					Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
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	----	----
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	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**90.5**	----	**94.5**	----	----
13C8-PFOA	----	0.0002	%		**102**	----	**98.0**	----	----

Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	76	136
13C8-PFOA	----	78	131

QUALITY CONTROL REPORT

Work Order	: **EB2509853**	Page	: 1 of 9
Client	: **SLR CONSULTING AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: PRAKASH HEWAVITHARANA	Contact	: Jarret Venderley
Address	: LEVEL 16 175 EAGLE STREET BRISBANE 4000	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: ----	Telephone	: +61-7-3552-8685
Project	: 623.030475 - Nelly Bay Sediment Investigation	Date Samples Received	: 24-Mar-2025
Order number	: 030475	Date Analysis Commenced	: 25-Mar-2025
C-O-C number	: ----	Issue Date	: 30-Mar-2025
Sampler	: JACKSON L		
Site	: ----		
Quote number	: EN-000		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This 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*
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Inorganics, Stafford, QLD
Beatriz Llarinas	Senior Chemist - Inorganics	Brisbane Soil Preparation, Stafford, QLD
Kirsty Watson	Senior Chemist - Organics	Brisbane Organics, 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: 6461985)									
EB2509769-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	3	60.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	3	<2	41.1	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	7	<5	28.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	8	<5	47.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	18	8	77.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	20	9	79.0	No Limit
EB2509836-004	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	48	50	3.8	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	42	45	6.6	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	17	16	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	26	12.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	13	13.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	47	53	12.1	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6461401)									
EB2506386-089	Anonymous	EA055: Moisture Content	----	0.1	%	0.3	0.3	0.0	No Limit
EB2509814-004	Anonymous	EA055: Moisture Content	----	0.1	%	2.1	1.9	10.6	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 (%)*
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6461402)									
EB2509853-002	FT02	EA055: Moisture Content	----	0.1 (1.0)*	%	44.2	38.0	15.2	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6461987)									
EB2509769-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EB2509836-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.3	92.4	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6461222)									
EB2506293-021	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002 (0.0010)*	mg/kg	0.0055	0.0050	9.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002 (0.0010)*	mg/kg	0.0015	0.0011	28.3	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002 (0.0010)*	mg/kg	0.157	0.138	13.3	0% - 20%
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002 (0.0010)*	mg/kg	0.0030	0.0024	22.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
EB2506293-083	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0010	0.0011	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0011	0.0013	16.4	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0130	0.0158	19.2	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0007	0.0009	28.3	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0239	# 0.0332	32.6	0% - 20%
		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: 6461222)									
EB2506293-021	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002 (0.0010)*	mg/kg	0.0013	0.0011	19.7	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	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: 6461222) - continued									
EB2506293-021	Anonymous	EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0025)*	mg/kg	<0.0025	<0.0025	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001 (0.005)*	mg/kg	<0.005	<0.005	0.0	No Limit
EB2506293-083	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0012	0.0016	23.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0032	0.0035	8.4	0% - 50%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0004	0.0006	26.4	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0011	0.0016	40.7	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 (0.0006)*	mg/kg	<0.0006	<0.0006	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: 6461222)									
EB2506293-021	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005 (0.0025)*	mg/kg	<0.0025	<0.0025	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0025)*	mg/kg	<0.0025	<0.0025	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0025)*	mg/kg	<0.0025	<0.0025	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0025)*	mg/kg	<0.0025	<0.0025	0.0	No Limit
EB2506293-083	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

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 (%)*
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6461222) - continued									
EB2506293-083	Anonymous	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 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6461222)									
EB2506293-021	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005 (0.0010)*	mg/kg	<0.0010	<0.0010	0.0	No Limit
EB2506293-083	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: 6461985)								
EG005T: Antimony	7440-36-0	5	mg/kg	<5	----	----	----	----
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	37.5 mg/kg	90.4	84.0	123
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
EG005T: Chromium	7440-47-3	2	mg/kg	<2	33 mg/kg	95.6	83.0	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	121 mg/kg	104	86.0	122
EG005T: Lead	7439-92-1	5	mg/kg	<5	133 mg/kg	105	84.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	32.5 mg/kg	106	81.5	118
EG005T: Silver	7440-22-4	2	mg/kg	<2	0.5683 mg/kg	126	70.0	130
EG005T: Zinc	7440-66-6	5	mg/kg	<5	216 mg/kg	102	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6461987)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1 mg/kg	78.4	70.0	125
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6461222)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	97.6	60.0	140
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0011 mg/kg	97.3	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00117 mg/kg	88.9	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00118 mg/kg	89.8	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00119 mg/kg	81.9	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00116 mg/kg	81.5	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0012 mg/kg	95.8	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6461222)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	92.5	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.2	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.0	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.6	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	100	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: 6461222) - continued								
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6461222)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	59.6	143
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.8	62.8	140
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	61.5	139
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	100	61.9	137
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.2	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6461222)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00117 mg/kg	96.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00118 mg/kg	95.8	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.0012 mg/kg	97.1	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.0012 mg/kg	78.8	54.8	124

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: 6461985)							
EB2509769-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	83.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.2	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	88.5	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	89.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.3	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	88.7	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	87.9	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6461987)							
EB2509769-001	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	76.0	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6461222)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6461222) - continued							
EB2506293-022	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	# Not Determined	60.0	140
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0011 mg/kg	# Not Determined	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00117 mg/kg	# Not Determined	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00118 mg/kg	# Not Determined	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00119 mg/kg	# Not Determined	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00116 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0012 mg/kg	# Not Determined	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6461222)							
EB2506293-022	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	# Not Determined	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	# Not Determined	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	# Not Determined	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	# Not Determined	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	# Not Determined	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	# Not Determined	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	# Not Determined	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	# Not Determined	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	# Not Determined	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	# Not Determined	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6461222)							
EB2506293-022	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	# Not Determined	48.0	128

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: 6461222) - continued							
EB2506293-022	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	# Not Determined	70.0	130
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	# Not Determined	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	# Not Determined	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6461222)							
EB2506293-022	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00117 mg/kg	# Not Determined	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00118 mg/kg	# Not Determined	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0012 mg/kg	# Not Determined	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0012 mg/kg	# Not Determined	54.8	124

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2509853**	Page	: 1 of 5
Client	: **SLR CONSULTING AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: PRAKASH HEWAVITHARANA	Telephone	: +61-7-3552-8685
Project	: 623.030475 - Nelly Bay Sediment Investigation	Date Samples Received	: 24-Mar-2025
Site	: ----	Issue Date	: 30-Mar-2025
Sampler	: JACKSON L	No. of samples received	: 3
Order number	: 030475	No. of samples analysed	: 3

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 Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **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

- **Analysis Holding Time Outliers exist - please see following pages for full details.**

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: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2506293--083	Anonymous	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	32.6 %	0% - 20%	**RPD exceeds LOR based limits**
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	EB2506293--022	Anonymous	**Perfluorohexane sulfonic acid (PFHxS)**	355-46-4	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EB2506293--022	Anonymous	**Perfluoroheptane sulfonic acid (PFHpS)**	375-92-8	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231A: Perfluoroalkyl Sulfonic Acids	EB2506293--022	Anonymous	**Perfluorooctane sulfonic acid (PFOS)**	1763-23-1	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231B: Perfluoroalkyl Carboxylic Acids	EB2506293--022	Anonymous	**Perfluorohexanoic acid (PFHxA)**	307-24-4	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EP231B: Perfluoroalkyl Carboxylic Acids	EB2506293--022	Anonymous	**Perfluorooctanoic acid (PFOA)**	335-67-1	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

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
EA055: Moisture Content (Dried @ 105-110°C)						
HDPE Soil Jar						
FT01, FT03	----	----	----	25-Mar-2025	13-Mar-2025	**12**
Soil Glass Jar - Unpreserved						
FT02	----	----	----	25-Mar-2025	13-Mar-2025	**12**

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.

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)							
HDPE Soil Jar (EA055) FT01, FT03	**27-Feb-2025**	**----**	----	----	**25-Mar-2025**	13-Mar-2025	×
Soil Glass Jar - Unpreserved (EA055) FT02	**27-Feb-2025**	**----**	----	----	**25-Mar-2025**	13-Mar-2025	×
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) FT02	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**26-Mar-2025**	26-Aug-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) FT02	**27-Feb-2025**	**25-Mar-2025**	27-Mar-2025	✓	**26-Mar-2025**	27-Mar-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) FT01, FT03	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**28-Mar-2025**	04-May-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) FT01, FT03	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**28-Mar-2025**	04-May-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) FT01, FT03	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**28-Mar-2025**	04-May-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) FT01, FT03	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**28-Mar-2025**	04-May-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) FT01, FT03	**27-Feb-2025**	**25-Mar-2025**	26-Aug-2025	✓	**28-Mar-2025**	04-May-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.

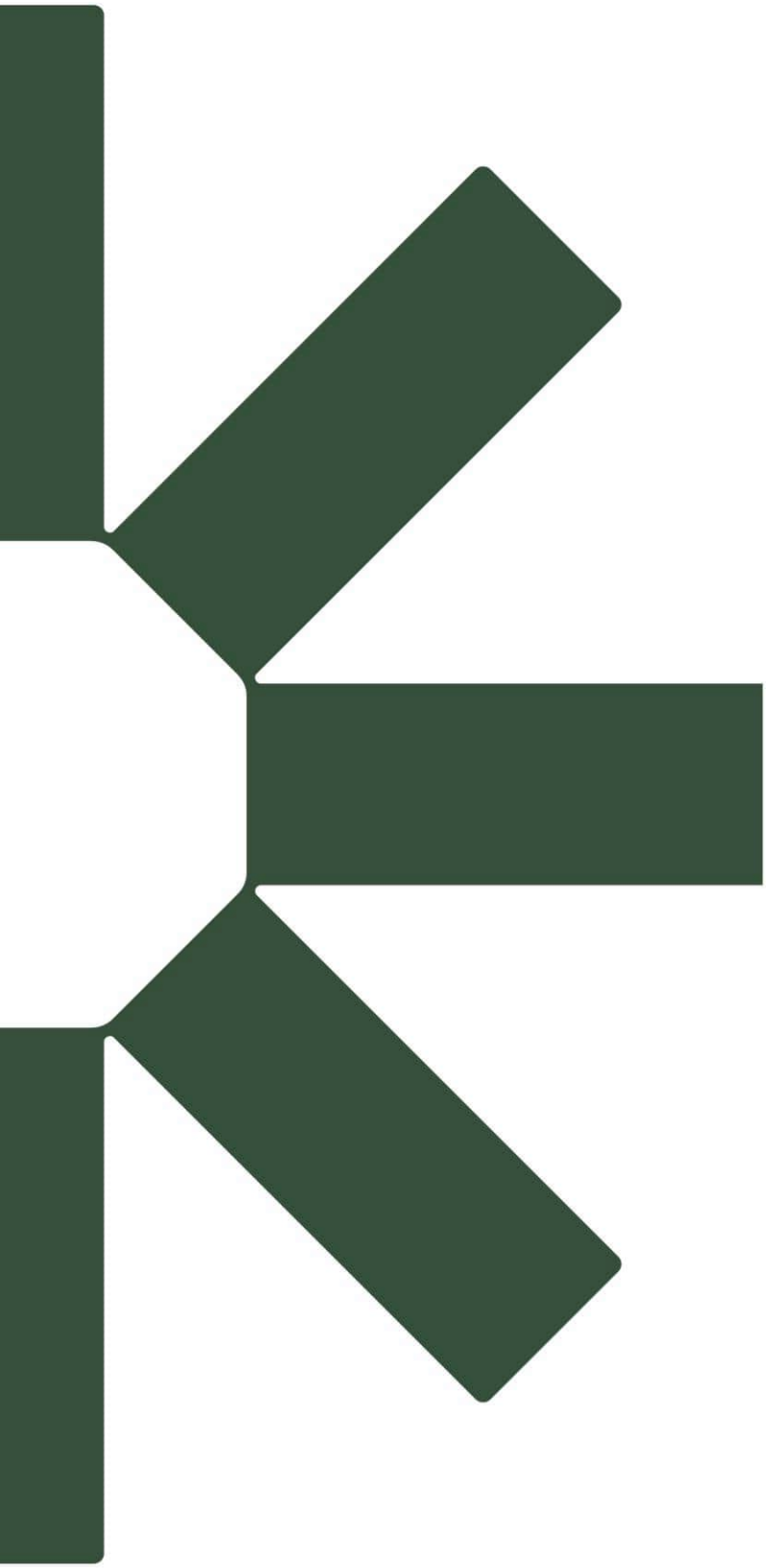
Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	3	22	**13.64**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.

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).
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.



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