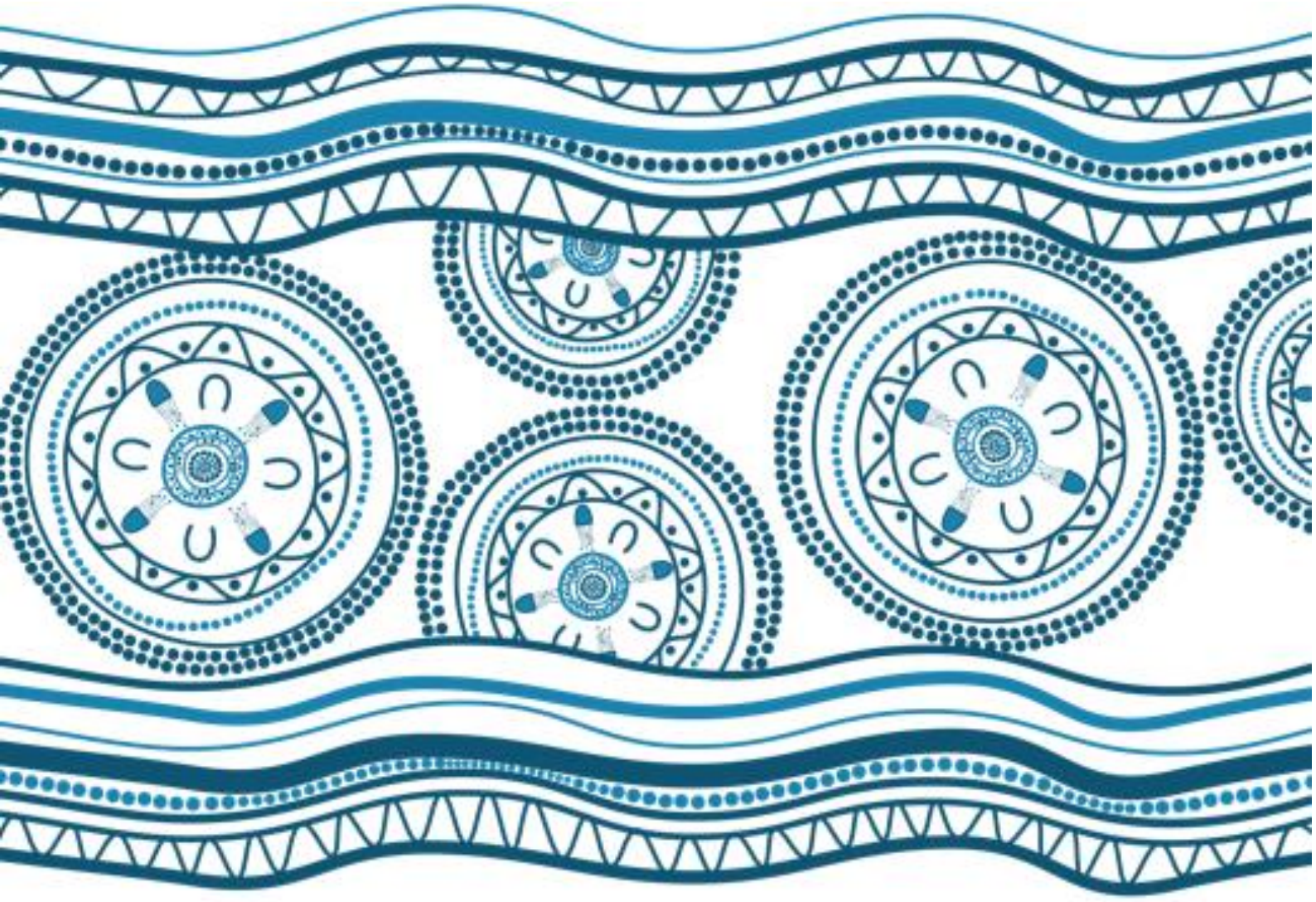
Appendix Q

Targeted Site Investigation



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Kamay Wharf Project

Targeted Site Investigation

10 June 2021

Project No.: 0564417

The business of sustainability

ERM

Document details	
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Signature Page

10 June 2021

Kamay Wharf Project

Targeted Site Investigation

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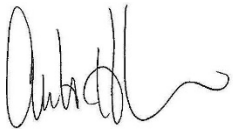

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EXECUTIVE SUMMARY

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Arup Australia Pty Ltd (Arup) to undertake a Targeted Site Investigation to be undertaken within the site identified as the Kamay Wharf Project, located in Kurnell and La Perouse, New South Wales (NSW- the 'Site').

ERM understands Transport for NSW (TfNSW) is seeking approval to reinstate the ferry wharves at La Perouse and Kurnell in Botany Bay (the Project) under Division 5.2 of the Environmental Planning and Assessment Act (EP&A Act) as State Significant Infrastructure.

- A concept design has been developed for the project, which forms the basis of this assessment. This Targeted Site Investigation has been prepared to support the Environmental Impact Statement (EIS) prepared for the project.

Background and Objectives

ERM undertook a Preliminary Site Investingation (PSI) within the Site, to assess the potential for contamination associated with current and historical land use practices to be present at the Site. Based on the outcomes of the PSI, it was concluded by ERM that further assessment should be undertaken to provide greater certainty on the potential constraints associated with contamination at the Site. It was recommended that an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the Project Area.

The objectives of these works were therefore to undertake a Targeted Site Investigation that refined the current understanding of the Project Area and assisted Arup in assessing potential constraints associated with site contamination that may require consideration prior to or during development of the proposed Kamay Ferry Wharf.

Investigation works were undertaken in general accordance with the ERM (2020) Sampling and Analysis Quality Plan (SAQP) and involved the excavation of boreholes within offshore locations and test pits within onshore locations at both the Kurnell and La Perouse Sites.

- ERM further notes that due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater had not been undertaken. Where groundwater sampling is undertaken at a later stage, an update to the Conceptual Site Model, will be provided as an addenda to this report.

The Target Site Investigation Report was completed to present the outcomes of the intrusive investigation and to provide recommendations based on analytical results and relevant guidelines. A further objective was to refine the Conceptual Site Model (CSM) to identify contamination risk in both on shore soils and off shore sediments in order to fulfil the requirements of Section 9 of the Secretary's Environmental Assessment Requirements (SEARs) and to allow for preliminary waste classification information.

Results and Conclusions

Based on field observations made during site investigation works, laboratory analysis of collected soil and sediment samples and with reference to the updated Conceptual Site Model (CSM) presented within Section 9.0, ERM concluded the following:

- Sediments were identified during offshore drilling works to range from 1.2 m to 11.2 m in thickness within the Kurnell and La Perouse sites respectively.
    - Laboratory analysis of collected samples retuned concentrations of (Contaminants of Potential Concern (CoPCs) less than the adopted screening criteria with the exception of nickel within one sample. It is considered that identified nickel concentrations were likely to be indicative of natural / background concentrations.
    - Laboratory analysis of sediment samples retuned concentrations of Monobutyltin (MBT) higher than LOR in all collected samples ranging from 0.75 mg/kg – 3.8 mg/kg. ERM notes that while there is no screening criteria for MBT, further consideration may be required to waste classification / disposal and dredging purposes.

- ERM notes that as works were undertaken concurrently with geotechnical works, limited sample volumes were obtained resulting in a reduced analytical suite being analysed.
- While concentrations of CoPCs within collected sediment samples were less than the adopted screening criteria, due to the limited number of samples collected and reduced sample volumes, additional information will be required for waste classification purposes.

- Fill materials within the onshore test pits located at Kurnell and La Perouse sites were identified to contain Asbestos Containing Materials (ACM) within several locations.
- Laboratory analysis of collected samples returned concentrations of all other CoPCs less than the adopted screening criteria. ERM notes that concentrations of Total Recoverable Hydrocarbons (TRH) (within both the Kurnell and La Perouse Sites) and Per and Polyfluoroalkyl Substances (PFAS) (La Perouse only) were identified to exceed the laboratory Limit of Reporting (LOR) but less than the screening criteria within several collected soil samples.
  - ERM notes that while these minor elevated concentrations are unlikely to be indicative of significant or widespread anthropogenic contamination or pose a risk to identified receptors, further consideration may be required prior to construction for waste classification purposes.
- While ERM notes that the completed sampling density during investigation works is insufficient to support waste classification of the Site, based on laboratory analysis of collected soil samples it is the opinion of ERM that fill materials within the Site may be classified as General Solid Waste (GSW) and General Solid Waste – Special Waste Asbestos (GSW-A).
  - Concentrations of benzo(a)pyrene were identified to exceed the hazardous waste classification criteria, however based on field notes this isolated exceedance is considered likely to be associated with historical road infrastructure (bitumen) and not indicative of significant anthropogenic contamination.
  - ERM notes that prior to construction, further assessment of the site is required to facilitate waste classification requirements.
- The assessment of Unexploded Ordnance (UXO) was not undertaken as part of this Targeted Site Investigation, however this may require further consideration should construction activities be required within areas mapped to contain potential UXO.

Recommendations

Based on the results of this Targeted Site Investigation, ERM recommends the following be additional works be undertaken prior to the commencement of construction works.

- Where groundwater is to be encountered or extracted during future development works, an assessment of groundwater should be completed to further inform the management of potential groundwater issues during construction and subsequent operation of the Site.
- Additional sampling and analysis of soils, sediments and (where necessary) groundwater should be undertaken to aid in the assessment of potential offsite disposal requirements.
- A Construction Environmental Management Plan (CEMP) detailing the require processes / procedures for the excavation, handling, storage and transport of sediments will be required.
- Prior to the commencement of construction works, an Asbestos Management Plan (AMP) and / or Site Management Plan (SMP) will be required to outline the required processes / procedures to be adopted for the remediation and / or management of asbestos within the Site. The AMP should also be developed in consideration of occupational safety / hygiene requirements during remediation and / or subsequent site operations.

The objective of refining the site CSM has been completed, however further works will be required prior to construction. The above recommendations should be carried out to fulfil the SEARs requirements (as outlined in Table 10.1), for a formal waste classification of any material to be removed offsite and to provide a management frame work for the identified asbestos, PAH and MBT contamination.

ACRONYMS AND ABBREVIATIONS

Name	Description
ACM	Asbestos Containing Material
AHD	Australian Height Datum
AMG	Australian Map Grid
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASS	Acid Sulfate Soils
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
CLM	Contaminated Land Management Act 1997
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
DP	Deposited Plan
DPI	Department of Primary Industries
DSI	Detailed Site Investigation
EPL	Environment Protection License
ESA	Environmental Site Assessment
m	Metre
m AHD	Metres Above Australian Height Datum
m bgl	Metres Below Ground Level
MBT	Monobutyl Tin
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NSW EPA	New South Wales Environment Protection Authority
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PFAS	Per and Polyfluoroalkyl Substances
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctane Sulfonate
POEO Act	Protection of the Environment Operations Act 1997
PSI	Preliminary Site Investigation
RAP	Remedial Action Plan
SAQP	Sampling and Analysis Quality Plan
SEARs	Secretary's Environmental Assessment Requirements
TBT	Tributyltin
TRH	Total Recoverable Hydrocarbons
UXO	Unexploded Ordnance

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Arup Australia Pty Ltd (Arup) to undertake a Targeted Site Investigation to be undertaken within the site identified as the Kamay Wharf Project, located in Kurnell and La Perouse, NSW (the Site).

The Project Area location is illustrated on **Figure 1a** and **Figure 1b** and the current layout is presented on **Figure 2a** and **Figure 2b.**

ERM understands Transport for New South Wales (Transport for NSW) is seeking approval to reinstate the ferry wharves at La Perouse and Kurnell in Botany Bay (the project) under Division 5.2 of the Environmental Planning and Assessment Act 1979 (EP&A Act) as State significant infrastructure.

The project would allow for an alternative connection between La Perouse and Kurnell rather than by road. The primary purpose of this infrastructure would be to operate a public ferry service to service visitors to the area and by the local community for cultural and recreational purposes. It would also provide supplementary temporary mooring for tourism-related commercial vessels and recreational boating.

The project provides opportunities for significant cultural and economic benefits to the local Aboriginal community by providing improved access to culturally significant sites.

It is also expected to deliver benefits and opportunities to wider communities on either side of Botany Bay such as investment opportunities in a ferry service and other new visitor/tourist experiences

A concept design has been developed for the proposed redevelopment which includes the following key features:

- Two new wharves, one at La Perouse and one at Kurnell that would include:
  - Berth for ferries (to accommodate vessels up to 40 m long);
  - Berth for recreational and commercial vessels (to accommodate vessels up to 20 m long);
  - Sheltered waiting areas and associated furniture;
  - Additional space within waiting areas to accommodate other users such as fishing and those using recreational vessels;
  - Signage and lighting;
- Landside paving, access ramps, seating and landscaping at the entrance to the wharves;
- Reconfiguration of existing car parking areas at La Perouse to increase the number of spaces (including provision of accessible parking and kiss-and-ride bays);
- Reconfiguration of footpaths around the new car parking area;
- Provision for bicycle racks at La Perouse; and
- Installation of utilities to service the wharves.

Information provided to ERM indicates the total construction period is anticipated to take up to 13 months, starting in early 2022. The construction of the two wharves will occur at the same time with landside and waterside works also occurring simultaneously.

A concept design has been developed for the project, which forms the basis of this assessment. This Targeted Site Investigation has been prepared to support the Environmental Impact Statement (EIS) prepared for the project.

1.1 Background and Objectives

ERM undertook a Preliminary Site Investigation (PSI) within the site (summarised within **Section 3.0**), to assess the potential for contamination associated with current and historical land use practices to be present at the Site.

Based on the outcomes of the PSI, it was the opinion of ERM that further assessment should be undertaken to provide greater certainty on the potential constraints associated with contamination at the Site. It was recommended that an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the Project Area.

To facilitate further assessment, following completion of the PSI, ERM developed a Sampling and Analysis Quality Plan (SAQP). The SAQP was developed to summarise the following key requirements for the completion of the Targeted Site Investigation:

- Data Quality Objectives (DQOs) for the proposed Targeted Site Investigation; and
- The methodology for the proposed works, including sampling, analytical and reporting requirements.

The objective of these works were to undertake a Targeted Site Investigation that refines the current understanding of the Project Area and aids Arup in assessing potential constraints associated with site contamination that may require consideration prior to or during development of the proposed Kamay Ferry Wharf.

- ERM notes that this investigation was undertaken concurrently with geotechnical and heritage investigations being undertaken by Arup and as such specific investigation methods differed slightly from those outlined within the SAQP.
- ERM further notes that due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater had not been undertaken. Where groundwater sampling is undertaken at a later stage, an update to the Conceptual Site Model, will be provided as an addenda to this report.

1.2 Report Objective

The Target Site Investigation report was completed to present the outcomes of the intrusive investigation and to provide recommendations based on analytical results and relevant guidelines. A further objective was to refine the Conceptual Site Model (CSM) to identify contamination risks in both on shore soils and off shore sediments in order to fulfil the requirements of Section 9 of the SEARs and to allow for preliminary waste classification information.

1.3 Scope of Works

To achieve the objectives outlined above, ERM completed the following scope of works:

- preparation of a Health and Safety Plan (HASP) and associated Job Hazard Analyses (JHA) for the required scope of works;
- drilling of 4 boreholes located within offshore locations at the Kurnell and La Perouse sites. Drilling works were undertaken concurrently with Arup geotechnical works;
- excavation of 6 test pits within the Kurnell site and 7 test pits within the La Perouse site bores to a maximum depth of 1.2 m bgl concurrently with Arup heritage investigation works; Peter Lavelle
- field screening and the collection / laboratory analysis of representative samples of fill and natural materials; and
- preparation of this report.

ERM notes that pre-investigation activities including obtaining DBYD plans, review of available utility plans and utility clearance and mark out of drilling locations using a qualified underground utilities service locator were undertaken by Arup as part of the concurrent geotechnical / heritage investigation works.

2. SITE IDENTIFICATION AND SETTING

ERM notes that the Kamay Wharf project is located within two sites located in Kurnell and La Perouse, NSW. Site specific information relating to the site information and site setting is presented within the following sections.

2.1 Site Identification

The site identification information is presented within the table below:

Table 2.1 – Site Identification Details

Site	Item	Description
Kurnell	**Legal Description**	■ Part Lot 71 DP 908; and ■ Part Lot 3 DP 1165618
	Local Government Area	■ Sutherland Shire Council
	Current Zoning	■ E1 – National Parks and Nature Reserves ■ E2 – Environmental Conservation ■ W1 – Natural Waterways ■ B1 – neighbourhood Centres
	Geographical Co-Ordinates	■ 34º00'22"S 151º33'00" E (approximate centre of Site)
	Site Location and Site Layout	■ Figure 1a and Figure 2a
La Perouse	**Legal Description**	■ Lot 5113 DP 752015 ■ Lot 1 DP 934156 ■ Lot 1057 DP 752015 ■ Lot 285 DP752015 ■ Part Lot 2 DP 776343 ■ Part Lot 1 DP 776343 ■ Part Lot 5086 DP 752015 ■ Part Lot 1 DP 862586 ■ Lot 5257 DP 824002 ■ Lot 5253 DP 824002 ■ Lot 5254 DP 824002 ■ Lot 5256 DP 824002 ■ Lot 5255 DP 824002 ■ Lot 1081 DP 752015 ■ Lot 7045 DP 1026891 ■ Lot 7043 DP 1026891 ■ Lot 1 DP 915424 ■ Lot 3 DP 1165618
	Local Government Area	■ Randwick Council
	Current Zoning	■ E1 – National Parks and Nature Reserves ■ RE1 – Public Recreation ■ SP2 - Infrastructure
	Geographical Co-Ordinates	■ 33º59'19"S 151º13'59" E (approximate centre of Site)
	Site Location and Site Layout	■ Figure 1b and Figure 2b

Table 2.2 (below) summarises information obtained during the site background and history review for the Kurnell and La Perouse Sites.

2.2 Site Setting

Table 2.2 – Site Identification Details

Site Identifier	Item	Description
Kurnell	**Site area**	Approximately 28.5 ha (including land and water portions of the Site)
	Current land-use	The site is currently comprised of undeveloped recreational land (beach, open grass parkland and vegetated bushland), open water (Botany Bay) and public roadways,
	Proposed Future Use	Re-instatement of public ferry wharves and associated infrastructure at La Perouse and Kurnell in Botany Bay
	Surrounding Land use	The land uses surrounding the site include: ■ **North:** Botany Bay; ■ **South:** Low density residential dwellings then the former Kurnell refinery (Caltex Kurnell Terminal); ■ **East:** Undeveloped recreational bushland then Botany Bay / Pacific Ocean; and ■ **West:** Low density residential dwellings (suburb of Kurnell) followed by undeveloped bushland / wetlands and then Botany Bay.
	Site Elevation	Between 0 – 4 m Australian Height Datum (AHD)
	Topography	■ Regional topography is generally flat with a slight slope to the north / north east. The portion of the site located on land slopes to the north in the direction of Botany Bay.
	Hydrology	■ The portion of the Site located on land was observed to be comprised of a public road way in the south western portion, of the Site, a public beach within the northern portion of the Site and undeveloped recreational land in the eastern portion. ■ During periods of rainfall, it is anticipated that surface waters would either flow into stormwater infrastructure located within Captain Cook Drive, infiltrate the site surface in unsealed portions of the Site or flow offsite to the adjacent Botany Bay.
	Geology, Soils and Acid Sulfate Soils	■ Geology mapping provided by NSW Planning and Environment – resources and energy indicates the site is underlain by an unnamed Quaternary formation comprising coarse quartz sands, varying amounts of shell fragments and clean to muddy, shelly, mostly marine sand overlying the Triassic Hawksbury Sandstone Formation comprising medium to coarse-grained quartz sandstone with minor shale and laminite lenses. ■ Soils within the site are described as deep podzols of dunes within swales and organic peats within swamp areas. ■ Mapping indicated that the western portion of the site was comprised of class 1, class 3 and class 5 Acid Sulfate Soils (ASS). Mapping indicated that there was a high probability of ASS occurring within subtidal marine sediments.
	Hydrogeology	Information from NSW Department of Primary Industries' and the Bureau of Meteorology indicated the following: ■ A search of registered groundwater bores identified 11 bores within the 2 km search radius. Standing water levels were measured between 0 m below ground level (bgl) and 3.0 m bgl. Registered bores were utilised for arrange of purposes including water supply, domestic, household, monitoring and water supply bores. ■ Drillers logs indicated that groundwater was identified within unconsolidated sand and clayey sand.

Site Identifier	Item	Description
La Perouse	**Site area**	Approximately 11.5 ha (including land and water portions of the Site)
	Current land-use	The site is currently comprised of undeveloped recreational land (open grass parkland), open water (Frenchmans Bay) and public roadways (Anzac Parade).
	Proposed Future Use	Re-instatement of public ferry wharves and associated infrastructure.
	Surrounding Land use	The land uses surrounding the site include: ■ **North:** Frenchmans Bay, low density residential dwellings and recreational parkland; ■ **South:** Botany Bay; ■ **East:** Undeveloped recreational bushland then Botany Bay / Pacific Ocean; and ■ **West:** Botany Bay followed by industrial land comprising fuel / chemical storage located approximately 1.5 km to the west of the Site.
	Site Elevation	Between 0 – 15 m Australian Height Datum (AHD)
	Topography	■ Regional topography is generally flat with a slight slope to the south / south east in the direction of the Pacific Ocean. ■ The central portion of the site is located at an elevation of approximately 15 m AHD and slopes to the south, east and west in the direction of Botany Bay.
	Hydrology	■ The portion of the Site located on land was observed to contain a centralised ring road (Anzac Parade). During periods of rainfall it is anticipated that surface water would either flow into stormwater infrastructure located within Anzac Parade, infiltrate the site surface in unsealed portions of the Site or flow offsite to the adjacent Botany Bay.
	Geology, Soils and Acid Sulfate Soils	■ Geology mapping provided by NSW Planning and Environment – resources and energy indicates the site is underlain by an unnamed Mesozoic formation comprising medium to coarse grained quartz and sandstone, very minor shale and laminite lenses and an unnamed Quaternary formation comprising coarse quartz sands and varying amounts of shell fragment. ■ Soils within the site are described as shallow discontinuous earthy sands and yellow earths on crests and insides of benches. Shallow siliceous sands on leading edges, shallow to deep leached sands, grey sands and gleyed podzolic soils in poorly drained areas ad localised yellow podzolic soils associated with shale lenses. ■ Mapping indicated that the western portion of the site was comprised of class 4 and class 5 Acid Sulfate Soils (ASS). Mapping indicated that there was a potential probability of ASS occurring within subtidal marine sediments.
	Hydrogeology	Information from NSW Department of Primary Industries' and the Bureau of Meteorology indicated the following: ■ A search of registered groundwater bores identified 37 bores within the 2 km search radius. Standing water levels were measured between 0 m below ground level (bgl) to 143.0 m bgl. The majority of bores identified groundwater at depths of between 3 m and 8 m bgl. Registered bores were utilised for arrange of purposes including water supply, domestic, household, monitoring and water supply bores. ■ ERM notes that the Site is located immediately adjacent to the NSW Office of Water Groundwater Extraction Exclusion Area (GEEA) - Area 2. Mapping indicates the exclusion zone extends from the northern boundary of the Site at the intersection of Anzac parade and Endeavour Avenue. ■ Drillers logs indicated that groundwater was identified within unconsolidated sand, clays and sandstone bedrock.

3. PREVIOUS INVESTIGATIONS

In undertaking this Targeted Site Investigation, ERM reviewed the following previous reports:

- Environmental Resources Management (2020) Kamay Wharf Project, Preliminary Site Investigation, 25th August 2020 (ERM 2020).
- Environmental Resources Management (2020) Kamay Wharf Project, Preliminary Site Investigation – La Perouse Site, 25th August 2020 (ERM 2020a).
- Environmental Resources Management (2020) Kamay Wharf Project, Sampling and Analysis Quality Plan, 4th September 2020 (ERM 2020b).

A summary of the above reports is presented with the following sections:

ERM 2020

ERM was engaged by Arup to undertake a PSI at the site identified as the Kamay Ferry Wharf Project located in Kurnell, NSW. The results of the PSI indicated the following:

- The site is located in predominantly public open space comprising beach area, parkland and undeveloped bushland associated with Botany Bay National Park with the northern portion of the site extending into Botany Bay.
- The site is underlain by a quaternary formation comprising coarse quartz sands, varying amounts of shell fragments and clean to muddy, shelly, mostly marine sand overlying the Triassic Hawksbury Sandstone Formation comprising medium to coarse-grained quartz sandstone with minor shale and laminate lenses.
- Groundwater within the surrounding area was identified at depths between 0 m bgl to 3.0 m bgl with registered bores utilised for a range of purposes including domestic, household, monitoring and water supply bores.
- Historical records indicate the site has largely been vacant since the 1950s with minor construction works of a small jetty / pier in the 1970s. The surrounding area has comprised low density residential to the west, open space / bushland to the east and the Kurnell refinery to the south since the 1950's to present time.

Based on information reviewed as part of the PSI, ERM considered there to be a potential risk to human health / ecological receptors due to the following potentially complete pollutant linkages identified at the site:

- Potential uncontrolled fill materials associated with construction of the existing roadways or levelling / site filling purposes;
- Potential PFAS contamination associated with Botany Bay and the adjacent Caltex refinery which are identified as NSW EPA PFAS investigation sites;
- Potential Acid Sulfate Soils associated with sediments located within Botany Bay and adjacent areas;
- Historical onsite and surrounding land uses including (but not limited to) the adjacent Caltex Kurnell Refinery which is currently regulated by the NSW EPA; and
- Potential impacted surface materials resulting from illegal dumping of waste materials.

ERM further noted that based on the proposed construction method, the potential release of contamination within subsurface soils and sediments would require consideration during the design of construction environmental controls.

It was the opinion of ERM that based on the results of the PSI, an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the site.

ERM 2020a

ERM was engaged by Arup to undertake a PSI at the site identified the Kamay Ferry Wharf Project located in la Perouse, NSW. The results of the PSI indicated the following:

- The site is located in predominantly public open space comprising beach area, parkland and undeveloped bushland associated with Botany Bay National Park with the northern portion of the site extending into Botany Bay.
- The site is underlain by an unnamed Mesozoic formation comprising medium to coarse grained quartz and sandstone, very minor shale and laminite lenses and an unnamed Quaternary formation comprising coarse quartz sands and varying amounts of shell fragment.
- Groundwater within the surrounding area was identified at depths between 0 m bgl to 143.0 m bgl. The majority of bores identified groundwater at depths of between 3 m and 8 m bgl. Registered bores were utilised for arrange of purposes including water supply, domestic, household, monitoring and water supply bores. ERM notes that the Site is located immediately adjacent to the NSW Office of Water Groundwater Extraction Exclusion Area (GEEA) - Area 2. Mapping indicates the exclusion zone extends from the northern boundary of the Site at the intersection of Anzac parade and Endeavour Avenue.
- Historical records indicate the site has largely been vacant since the 1930s with limited use of the Site for Defence purposes in the 1940s. Records from this time indicate the potential for Mortar Firing to have been undertaken in an easterly direction towards Congwong Bay. ERM notes that a small pier was observed in aerial photographs from the 1930's and may be associated with the adjacent historical sand mining in Frenchmans bay. Following closure / demotion of Defence buildings the site has been used for recreational parkland and the la Peruse Museum.

Based on information reviewed as part of the PSI, ERM considered there to be a potential risk to human health / ecological receptors due to the following potentially complete pollutant linkages identified at the site:

- Potential uncontrolled fill materials associated with construction of the existing roadways or levelling / site filling for construction of onsite building structures;
- Potential PFAS contamination associated with Botany Bay and the adjacent Caltex refinery which are identified as NSW EPA PFAS investigation sites;
- Potential Acid Sulfate Soils associated with sediments located within Botany Bay and adjacent areas;
- Potential use of hazardous materials within onsite historical and current building structures;
- Historical onsite and surrounding land uses including (but not limited to) former Defence land uses, sand mining etc.; and
- Potential Unexploded Ordnance located within a former Mortar Firing area located to the East of the Site.

ERM further noted that based on the proposed construction method, the potential release of contamination within subsurface soils and sediment would require consideration during the design of construction environmental controls.

It was the opinion of ERM that based on the results of the PSI, an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the site.

ERM 2020b

ERM was engaged by to prepare a SAQP for a Targeted Site Investigation to be undertaken within the site identified as the Kamay Wharf Project, located in Kurnell and La Perouse, NSW (the Site). The objectives of this SAQP were to summarise the:

- Data Quality Objectives (DQOs) for the proposed Targeted Site Investigation; and
- The methodology for the proposed works, including sampling, analytical and reporting requirements.

4. PRELIMINARY CONCEPTUAL SITE MODEL

Based on the results of ERM (2020) and ERM (2020a) PSIs, ERM developed the following preliminary CSMs for both the Kurnell and La Perouse sites outlining the potential source, pathway and receptors linkages.

4.1 Preliminary Conceptual Site Model – Kurnell

Based on the results of the desktop assessment, site inspection and the potential sources, pathways and receptors identified above ERM developed the below Conceptual Site Model (CSM) for the Kurnell site.

Table 4.1 – Conceptual Site Model

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Uncontrolled fill	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	■ Potential for uncontrolled fill materials to have been imported to the Project Area from adjacent industrial sites / unknown sources during construction of roadways and other minor construction works within the Project Area.
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low	
	Transport of contaminants through mechanical transport	■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	
Historical onsite and surrounding land uses	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ The Kurnell refinery is located approximately 200 m to the south of the Project Area. ■ The northern portion of the Project Area was identified to contain a former pier / jetty area. ■ The fuel terminal jetty is located approximately 200 m to the west of the Project Area and is utilised for loading of large transport ships.
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Moderate	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Moderate - High	■ PFAS contamination may be present from surrounding industrial properties and other sites discharging to Botany Bay resulting in potential impact to surface water and sediments. ■ Nutrient / inorganic compound may be present within sediments located within the intertidal zone ■ ASS mapping indicates the likely presence of ASS within intertidal sediments ■ ERM notes that based on the likely saline nature of groundwater within the Project Area, the onsite use of groundwater for beneficial purposes is unlikely.
	Transport of contaminants through mechanical transport (during excavation of sediments etc)	■ Workers carrying out development, installation or maintenance works within the Project Area.	High	
Hazardous building materials	Inhalation of contaminated dust / fibres.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area	Low - Moderate	■ While no evidence of illegal dumping was noted during the Project Area inspection, the potential for dumped waste materials within portions of the Project Area (particularly bushland areas) should be considered.
	Transport of contaminants through mechanical transport	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	

4.2 Preliminary Conceptual Site Model – La Perouse

Based on the results of the desktop assessment, site inspection and the potential sources, pathways and receptors identified above ERM developed the below Conceptual Site Model (CSM) for the La Perouse Site.

Table 4.2 – Conceptual Site Model La Perouse

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Uncontrolled fill	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	■ Potential for uncontrolled fill materials to have been imported to the Project Area from unknown sources during construction of roadways and other construction works within the Project Area associated within current and historical building structures.
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low	
	Transport of contaminants through mechanical transport	■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	
Historical onsite and surrounding land uses	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ Potential contamination associated with the use and storage of equipment utilised in the former sand mining undertaken within Frenchmans Bay. ■ Potential groundwater contamination associated with the adjacent groundwater extraction exclusion area (GEAA) ■ The western portion of the Project Area was identified to contain a former pier / jetty area.
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Moderate	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Moderate	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
	Transport of contaminants through mechanical transport (during excavation of sediments etc)	■ Workers carrying out development, installation or maintenance works within the Project Area.	High	■ PFAS contamination may be present from industrial properties located in the vicinity and other sites discharging to Botany Bay resulting in potential impact to surface water and sediments. ■ Nutrient / inorganic compound may be present within sediments located within the intertidal zone ■ ASS mapping indicates the likely presence of ASS within intertidal sediments ■ ERM notes that based on the likely saline nature of groundwater within the Project Area, the onsite use of groundwater for beneficial purposes is unlikely.
Hazardous building materials	Inhalation of contaminated dust / fibres.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area	Low - Moderate	■ ERM notes that onsite buildings are scheduled to remain onsite following demolition and remain undisturbed, however it may be prudent to undertake a hazardous materials investigation of onsite structures to assess the potential for surficial impact to be present within the Project Area associated with degrading building materials. ■ While no evidence of illegal dumping was noted during the Project Area inspection, the potential for dumped waste materials within portions of the Project Area (particularly bushland areas) should be considered.
	Transport of contaminants through mechanical transport	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	
Unexploded Ordnance	Disturbance during future construction works	■ Workers / site users ■ Ecological receptors	Low - Moderate	■ ERM notes that UXO mapping indicated the area to the east of the Project Area (outside the Project Area boundary) was utilised for Mortar firing.

5. DATA QUALITY OBJECTIVES

The ERM (2020b) SAQP developed Data Quality Objectives (DQOs) for this investigation. The DQOs for were developed in general accordance with the requirements outlined within the ASC NEPM and the Australian Standard AS4482 *Guide to the Sampling and Investigation of Potentially Contaminated Soil*.

5.1 Step 1 – State the Problem

The ERM (2020) and ERM (2020a) PSI identified a range of potentially contaminating historical land uses / activities at the site and surrounding area, as such Arup required completion of a Targeted Site Investigation to assess the potential for contamination to be present at the site that may require consideration during potential redevelopment works of the Site.

5.2 Step 2 – Identify the Decisions

Based upon the objectives of the Targeted Site Investigation the decisions required to meet the objectives are discussed below:

- Are there (or will the proposed development create) any potential unacceptable risks to human health and / or ecological receptors from contaminants in fill / soil and / or groundwater?
- Is there any evidence of, or potential for, migration of contaminants from the Site?
- Is there any evidence of, or potential for, off-site migration of contaminants from adjacent sites onto the Site?
- Is there sufficient information on the distribution and characteristics of contaminated media across the site to evaluate risk of harm to human health and/or the environment and whether off-site migration of contamination may have occurred?
- Is management or remediation of contamination, if identified, required?
- Is there sufficient information on the distribution and characteristics of contaminated media across the site to develop a Remediation Action Plan or Site Management Plan to (where necessary) remediate and / or manage site contamination?

5.3 Step 3 – Identify Information Inputs

The inputs to make the above decisions include:

- Information relating to the environmental setting of the site and surrounding area obtained during preparation of the ERM (2020) and ERM (2020a) PSI.
- Field observations made during intrusive investigation works.
- Laboratory analytical data of collected soil and groundwater samples.
- Field measurements collected during intrusive investigation and groundwater monitoring rounds.
- Screening-level assessment criteria from guidelines made or approved by the NSW EPA detailed within Section 7.0.
- Confirmation of acceptable data quality by assessment of data quality assurance / quality control by comparison against Data Quality Indicators (DQI).

5.4 Step 4 – Define the Study Boundaries

The boundaries of the investigation are identified as follows:

- Spatial boundaries – the investigation is limited to the site boundaries as illustrated **within Figure 1a** and **Figure 1b** and the maximum depth of investigation at each location detailed within Section 8.1 of this report.
- Temporal boundaries – the temporal boundary is limited to the data collected during the investigation works which occurred between in October / November 2020 As such, seasonality will not be assessed at this stage of the investigation.
- Constraints within the study boundaries – the following were potential limitations that required consideration within the development of the sampling strategy:
  - Restrictions associated with drilling over water.
  - Access restrictions associated with site topography and vegetation.
  - Restrictions associated with existing operational roadways and members of the general public.
  - Possible presence of underground and overhead utilities.

Sampling locations were selected taking into consideration the above factors.

5.5 Step 5 – Develop the Decision Rules

The decision rules adopted for this investigation are included in the table below:

Table 5.1 – Decision Rules

Decision Required to be Made	Decision Rule
Is the data sufficient to address the objectives of the investigation?	■ Does the collected data indicate the potential for significant and widespread contamination arising from key AECs identified within ERM (2020) and ERM (2020a) ■ Do field observations (including visual, olfactory, presence of anthropogenic materials in fill) indicate potential significant contamination at the investigation locations? ■ Does analytical data exceed adopted screening-level assessment criteria? ■ Have any additional areas of potential environmental concern been identified within investigations works?
Is the data generated by sampling and analysis of an acceptable quality?	■ Has the data collected been subjected to an assessment of quality assurance/quality control and found to be suitable for use in this assessment?
Does the site contain contamination resulting from historical land uses?	■ Collected samples were analysed for CoPCs associated with current and historical land uses practices and results compared to relevant NSW EPA endorsed regulatory guideline criteria.
Is there evidence of significant widespread contamination?	■ Collection of representative soil, sediment and groundwater samples during site investigation works.
Is additional information required to determine the potential liabilities/constraints associated with the proposed development?	■ If it was determined that additional information is required to further reduce the uncertainties associated with the distribution and characterisation of soil, sediment and / or groundwater contamination, then appropriate recommendations for further assessment and/or investigation (including for assessment of potential risks) will be provided.
Is there sufficient information to develop a remedial / site management strategy	■ Do the results of the investigation provide sufficient information of the nature, distribution and risk to identified receptors of contamination within soil and groundwater? If no, additional investigation may be required,

5.6 Step 6 – Specify Limits of Decision Error

This step establishes the decision maker's tolerable limits on decision errors, which provide performance goals for limiting uncertainty in the data. Data generated during this project must be appropriate to allow decisions to be made with confidence.

Specific limits for this project have been adopted in accordance with the appropriate guidance from the HEPA (2020) NEMP and the ASC NEPM appropriate data quality indicators (DQIs) used to assess data quality assurance / quality control (QA / QC) and standard ERM procedures for field sampling and sample handling.

To assess the usability of the data prior to making decisions, the data will be assessed against pre-determined DQIs for precision, accuracy, representativeness, comparability and completeness.

The pre-determined DQIs established for the project are discussed below in relation to precision, accuracy, representativeness, comparability, completeness and sensitivity.

- **Precision** – measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples.
- **Accuracy** – measures the bias in a measurement system. The accuracy of the laboratory data that are generated during this project is a measure of the closeness of the analytical results obtained by a method to the 'true' value. Accuracy is assessed by reference to the analytical results of laboratory control samples, laboratory spikes and analyses against reference standards.
- **Representativeness** – expresses the degree with which sample data accurately and precisely represent a characteristic of a population or an environmental condition. Representativeness is achieved by collecting samples on a representative basis across the site, and by using an adequate number of sample locations to characterise the site to the required accuracy.
- **Comparability** – expresses the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in sampling techniques, analytical techniques and reporting methods.
- **Completeness** – is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study.
- **Sensitivity** – expresses the appropriateness of the chosen laboratory methods, including the limits of reporting, in producing reliable data in relation to the adopted assessment criteria.

If any of the DQIs are not met, further assessment will be necessary to assess whether the non-conformance will significantly affect the usefulness of the data. Corrective actions may include requesting further information from samplers and/or analytical laboratories, downgrading of the quality of the data or alternatively, re-collection of the data. DQIs are provided the table below.

Table 5.2 – Data Quality Objectives and Data Quality Indicators

Data Quality Objectives	Frequency	Data Quality Indicator
Precision		
Blind duplicates (intra laboratory)	■ 1/20 samples (or 1/10 for PFAS)	■ <30% RPD where result is >10 times Limit of Reporting (LOR
Blind duplicates (inter laboratory)	■ 1/20 samples (or 1/10 for PFAS)	■ <30% RPD where result is >10 times LOR
Accuracy		
Surrogate spikes	■ All organic samples	■ 70-130%
Laboratory control samples	■ 1 per lab batch	■ 70-130%
Matrix spikes	■ 1 per lab batch	■ 70-130% ■ Lower recoveries may be acceptable for OCPs, OPPs, PCBs and phenols and will be assessed according to USEPA protocols.
Representativeness		
Sampling appropriate for media and analytes	■ NA	■ NA
Samples extracted and analysed within holding times.	■ NA	■ organics (14 days), inorganics (6 months)
Rinsate blank	■ 1 per day where non-dedicated equipment is used. ■ Samples are to be analysed for all CoPCs other than asbestos.	■ <LOR
Trip spike	■ 1 per lab batch (BTEX only)	■ 70-130%
Method blank / field blank	■ 1 per lab batch	■ <LOR
Comparability		
ERM standard operating procedures for sample collection & handling	■ All samples	■ All samples
NATA* accredited analytical methods used for all analyses	■ All samples	■ All samples
Consistent field conditions, sampling staff and laboratory analysis	■ All samples	■ All samples
Completeness		
Sample description and Chain of Custodies completed and appropriate	■ All samples	■ All samples
Appropriate documentation	■ All samples	■ All samples
Satisfactory frequency and result for QC samples	■ All QA / QC samples	■ -
Data from critical samples is considered valid	■ NA	■ Critical samples valid
Sensitivity		
Limits of reporting appropriate and consistent	■ All samples	■ All samples

5.7 Step 7 – Optimise the Design for Obtaining Data

Historic uses of the sites indicate the potential for contamination to be present that may pose a risk to human health or the environment. The potentially contaminating sources and activities undertaken at the sites are detailed above and within ERM (2020) and ERM (2020a).

Based on the nature of identified potential contamination and the information required to inform potential design constraints, a targeted assessment of soil, sediment and groundwater was undertaken within the Site.

- As outlined above, due to project timing, this Targeted Site Investigation was undertaken in a staged approach and as such the assessment of groundwater had not been undertaken at the time of this draft report. Following completion of groundwater well installation and sampling, all additional information, including (where required) an update to the Conceptual Site Model, will be provided in an addenda to this report.

6. INVESTIGATION METHODOLOGY

6.1 Fieldwork Methodology

Field investigation works were undertaken in general accordance with the requirements detailed within the ERM (2020) SAQP.

The following table summarises the scope of works and methodology undertaken during completion of this Targeted Site Investigation. Sampling locations are illustrated on **Figure 3a** and **Figure 3b**.

- ERM notes that the investigation was undertaken concurrently with Arup geotechnical and heritage works investigation works and as such specific investigation methods differed slightly from those outlined within the SAQP.
- ERM further notes that due to project timing, this Targeted Site Investigation was undertaken in a staged approach and as such the assessment of groundwater had not been undertaken at the time of preparation of this draft report. Where groundwater sampling is undertaken at a later stage, an update to the Conceptual Site Model, will be provided in an addenda to this report.

Table 6.1 – Fieldwork Methodology

Task	Proposed Scope
1 – Project Preliminaries	Prior to the commencement of investigation works, ERM completed the following: ■ Preparation of a site specific Health and Safety Plan (HASP) and associated Safe Work Method Statements (SWMS)
2 – Service Location	■ ERM notes that Arup undertook all service clearance activities during concurrent geotechnical / heritage investigations.
3 – Equipment Calibration	All equipment used in the field was operated under the appropriate technical procedures and calibrated prior to use in accordance with the manufacturer's specifications. ■ The PID was calibrated to an isobutylene standard at the beginning of each working day in accordance with manufacturer requirements and ERM's SOPs. ■ All of the relevant calibration records are provided within **Appendix E.**
4 – Soil / Sediment Sampling	Contamination investigation works were undertaken concurrently with geotechnical / heritage investigations involved a range of test pitting (located within onshore locations) and soil bores (located within offshore locations). The specific sampling locations are detailed within **Figure 3a** and **Figure 3b**. The Investigation methodology implemented by Arup during completion of these works is detailed within **Appendix F**. ■ Soil sediment investigation works were undertaken in both onshore locations (test pitting) and offshore locations (drilling) at both the Kurnell and La Perouse Sites. ■ During investigation works soil / sediment was logged by an appropriately trained and experienced scientist / engineer to record the following information: soil type, colour, grain size, sorting, angularity, inclusions, moisture condition, structure, visual signs of contamination (including staining and fragments of fibre cement sheeting) and odour in general accordance with AS 1726. Borelogs from completed investigation locations are presented within **Appendix C**. ■ In general, two primary samples were analysed from each sampling location. Field quality control/quality assurance (QA/QC) samples were collected including field duplicates, inter-laboratory duplicates, rinsate blanks, trip blanks and trip spikes (as per the requirements detailed below within **table 5.2**);

Task	Proposed Scope
	■ All sampling locations were field screened with a calibrated photoionisation detector (PID) for the presence of ionisable volatile compounds. Results from PID field screening are presented within the bore logs (**Appendix C**). ■ All collected samples were placed within laboratory-supplied containers, stored in a chilled cooler and transported to a NATA accredited laboratory analysis under chain of custody conditions for the required analysis. ■ All soil bore / test pit locations were GPS recorded for incorporation into subsequent reporting.
5 - Groundwater Well Installation / Sampling	■ Due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater had not been undertaken at the time of preparation of this draft report.
6 - Equipment Decontamination	All re-useable sampling equipment was decontaminated between sampling locations. All non-dedicated equipment was decontaminated as follows: ■ all loose soil removed with a wire brush; ■ washed in potable (tap) water and brush scrubbing using tap water and a non-phosphate / PFAS free detergent (Decon 90 / Liquinox respectively) and deionised water; ■ rinsed with water; and ■ air dried. Rinsate samples were collected as per the requirements of this SAQP to confirm the appropriateness of equipment decontamination. Results of project QAQC requirements are discussed within **Appendix D**.

7. ASSESSMENT CRITERIA

The adopted assessment criteria have generally been sourced from guidelines made or approved by the NSW EPA which includes the National Environmental Protection Council (NEPC) (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 and where alternative sources have been utilised appropriate justification has been provided.

Individual soil and groundwater data, along with the maximum, minimum, mean, standard deviation and 95% Upper Confidence Limit (UCL) of the mean concentration (if required) were compared to the following relevant assessment criteria.

- ERM notes that the ERM (2020) included specific assessment criteria for collected groundwater samples. As previously noted details of groundwater investigation works will be reported once available and hence groundwater criteria are not presented below.

Table 7.1 – Assessment Criteria

Media	Assessment Criteria
Soil	Human Health Soil contaminant concentrations were compared against published values consistent with requirements in NEPM, 2013 sourced from the following: ■ **Health Investigation Levels** (HILs): ▪ HIL B (high density residential) ▪ HIL C (recreational) ▪ HIL D (commercial / industrial). ■ **Health Screening Levels (**HSLs) for vapour intrusion: ▪ HSL B (high density residential) ▪ HSL C (recreational) ▪ HSL D (commercial / industrial). ■ **Ecological Investigation Limits** ▪ Commercial and industrial land use (Ecological – Direct Contact) Coarse ▪ Urban residential and open space – coarse Management Limits ■ Management Limits for assessment of risks to human health in residential, parkland and public open space as well as commercial and industrial settings will be applied subsequent to the above screening criteria. Aesthetic ■ Consideration with also be given to the aesthetics of the soil encountered.
Sediment	■ *Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines,* CSIRO Land and Water Science Report 08/07 (Simpson, Batley & Chariton 2013).

7.1 PFAS Specific Assessment Criteria

A targeted sampling approach to assess potential point sources of the potential use and storage of PFAS will be adopted. Where PFAS investigation is required, the following sections describe the assessment criteria to be used based on the identified land use scenarios.

7.1.1 Soil Criteria

The adopted assessment screening criteria relevant to the different potential exposure scenarios are detailed in the following table.

Table 7.2 – PFS Assessment Criteria (Soil)

Land use Scenario	Source and Rationale		
	PFOS and/or PFHxS	PFOA	Comment
Health Based Guidance Values			
Public open space	1 mg/kg	10 mg/kg	■ For site areas where recreational use may be undertaken the public open space guidance will be utilised. ■ Based on 20% of FSANZ TDI, i.e. up to 80% of exposure is assumed to come from other pathways. National Environment Protection (Assessment of Site Contamination) Measure Health Investigation Level C assumptions for public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools (except where soil used for agriculture studies) and footpaths. ■ It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate.
Ecological Guideline Values			
Soil – ecological direct exposure.	1 mg/kg	10 mg/kg	■ Soil results collected from the sites will be assessed against the public open space criteria presented in NEMP (2020). ■ The NEPM states that 'future work is recommended to review available soil – ecological direct exposure criteria proposed by Australian research and industry organisations. As an interim, it is proposed that the human health screening value for Public open space be used.'
Soil – ecological indirect exposure	0.01 mg/kg	NA	■ Soil results collected from all sites will be assessed against the interim soil – ecological indirect exposure Residential presented in NEMP (2020) ■ ERM notes that the indirect guidelines are likely to be overly conservative for the sites and will be considered in a site-specific context in subsequent project phases.

7.1.2 Sediment Criteria

There are no published health or ecological screening criteria for PFAS in sediment. The primary issues of concern associated with PFAS in sediment are as follows.

- Potential human health impacts due to direct contact exposure to sediment.
- The potential for sediment to act as a source of PFAS that may remobilise into the water column and/or aquatic food chains.
- The potential for sediment and / or sediment pore water concentrations to pose direct eco-toxicological effects.

In consideration of the primary risks / exposure scenarios, the following tier 1 screening criteria have been adopted.

- Health-based screening criteria for open space and residential soil (NEMP 2020) have been adopted to assess potential health risks due to direct contact with sediment by human receptors.
    - ERM notes that while soil criteria are not derived with specific consideration of sediment exposure, the frequency and duration of exposure to sediments during recreational use of water bodies are much lower than those assumed for soil exposure in a residential setting. Use of residential soil criteria is therefore considered protective of potential risk due to sediment exposure.

- Interim Soil – ecological direct exposure for public open space (NEMP 2020) have been used to assess the sediments.
  - ERM notes that while the soil criteria have not been derived with specific consideration of sediment exposure the use of the guideline for screening purposes in conjunction with the surface water sampling is considered appropriate for the investigation
- Potential impacts on surface water and/or the aquatic food chain have been assessed by comparison of surface water concentrations to relevant screening levels.
- There is currently insufficient data regarding direct sediment toxicity to sediment dwelling organisms, thus no screening criteria are available for this pathway.
  - As an interim measure the NEMP recommends the human health value of 1 mg/kg be used to evaluate soil and this has been used to evaluate provide an indication the exposure of organisms to concentrations in sediment.

7.2 Waste Classification Criteria

While ERM notes that sampling works were not undertaken at a density to suitably assess the requirements for offsite waste disposal of soils and / or sediments, for initial screening purposes, collected samples were assessed against the following guidance relevant for the disposal of soils and sediments.

- NSW EPA (2014) Waste Classification guidelines; and
- ANZG 2018) Guidelines for Fresh and Marine Water Quality and Sediment Guidelines.

8. RESULTS

8.1 Field Observations

Figure 3 and **Figure 3b** presents soil investigation locations. Bore logs detailing the stratigraphic conditions encountered during drilling of boreholes are presented in **Appendix C**.

Offshore drilling works were undertaken concurrently with Arup geotechnical investigations. Borelogs detailing encountered lithology from Arup geotechnical consultants are provided within **Appendix C**. A general description of lithology encountered during drilling works is provided below.

During offshore drilling works at Kurnell marine deposits comprising medium to fine, sub-rounded to sub- angular, dark grey sands, with some shell fragments were identified to be present to a depth of approximately 1.2 m bgl (from surface of sea bed) overlying natural sandstone bedrock.

- No staining / odours or other visual / olfactory indications of potential chemical contamination were identified during investigation works.

During offshore drilling at La Perouse marine deposits comprising medium to fine, sub-rounded to sub- angular, dark grey sands, with some shell fragments and clayey sands, fine to medium, rounded to sub-rounded, grey mottled dark were identified to depths of approximately 11.2 m bgl (from surface of sea bed) overlying natural sandstone bedrock.

- No staining / odours or other visual / olfactory indications of potential chemical contamination were identified during investigation works.

Onshore test pitting works were undertaken concurrently with Arup heritage investigations. Borelogs detailing encountered lithology are provided within **Appendix C**. During onshore investigation works, the following lithology was observed within excavated test pits.

Table 8.1 General Site Geological Profile – Kurnell Site

Lithological Unit	Description	Approximate Depth (m BGL)
Topsoil	Brown Sandy Topsoil's	0.0 – 0.15
Fill	Brown sandy fill, damp, minor foreign materials eg. Glass, concrete and ACM (TP04, TP05 and TP06). No odours, no staining	0.15 – 0.4
Fill	Dark brown sandy fill with minor foreign materials, no odour, no staining.	0.4 – 0.7
Natural Soils	Yellow sand with shell fragments, sorted, no odour, no staining.	0.7 – 1.2

Table 8.2 General Site Geological Profile – La Perouse Site

Lithological Unit	Description	Approximate Depth (m BGL)
Topsoil	Brown Sandy Topsoil's, coarse, damp with roots, foreign materials and ACM (TP04, TP07 and TP10), no odour, no staining	0.0 – 0.2
Fill	Dark brown sandy fill with sandstone inclusions, brick and gravels.	0.2 – 0.6
Natural Soils	Sandy Clay/ Sand, light brown/ grey with sandstone inclusions, damp.	0.6 – 1.0

ERM notes that during offshore works, no staining, odours or other visual / olfactory indications of anthropogenic contamination were identified during investigation works.

During onshore investigation works, no staining / odours or other visual / olfactory indications of potential chemical contamination were identified during investigation works. ERM notes that during onshore testing pitting works, builders waste and potential Asbestos Containing Materials (ACM) were identified within fill materials at several test pits at both the Kurnell and La Perouse sites.

- Potential ACM was noted within the Kurnell Site within test pits TP04, TP05 and TP06 located adjacent to Captain Cook Drive (**Figure 4a**).
- Potential ACM was noted within the La Perouse Site within test pits TP04, TP07 and TP10 located adjacent to Anzac Parade (**Figure 4b**).

8.2 Analytical Results

8.2.1 Analytical Results - Soil

Laboratory analysis of collected soil samples reported concentrations of all CoPCs less than the laboratory limit of reporting (LOR) and / or the assessment criteria within all collected samples with the exception of the following:

- Asbestos identified within fill materials located within test pits TP04, TP05 and TP06 located within the Kurnell Site adjacent to Captain Cook Drive (**Figure 4a**).
  - ERM notes that based on laboratory analysis, asbestos was identified to be bonded with no asbestos fibres / fibrous asbestos (AF / FA) identified within collected samples.
- Asbestos identified within fill materials located within test pits LP-BH01, TP04, TP07 and TP10 located within the La Perouse Site adjacent to Anzac Parade (**Figure 4a**).
  - ERM notes that based on laboratory analysis, asbestos was identified to be bonded with no asbestos fibres / fibrous asbestos (AF / FA) identified within collected samples.

ERM notes that concentrations of Total Recoverable Hydrocarbons (TRH) C^{10}-C^{40} above the LOR but less than the adopted assessment criteria were identified within surface soils collected from both the Kurnell and La Perouse Sites. Concentrations within collected samples ranged from 140 mg/kg – 700 mg/kg less than the adopted screening criteria of 3300mg/kg.

- Sample locations with slightly elevated TRH concentrations were in general adjacent to existing roadways. PID readings collected from samples returned concentrations of 0 PPM.
- As such it is considered that isolated low level TRH concentrations are likely to be representative of current roadway construction materials and not indicative of significant or widespread potential contamination.

Sample location LP-TP06_0.25 (La Perouse) returned concentrations of TRH C^{10}-C^{40} of 6000 mg/kg. Field observations made during investigation works identified the presence of a potential historical roadway within this location. PID readings collected from samples returned concentrations of 0 PPM. As such it is considered that the elevated TRH within LP-TP06_0.25 are associated with historical road base materials and not indicative of significant or widespread anthropogenic contamination.

PFAS (Sum of PFHxS and PFOS) exceeding LOR but less than the adopted assessment criteria was identified within surface soils within LP-TP07-0.1 and LP-TP07-0.2. ERM notes that PFAS was not detected within any other collected soil samples from either the Kurnell or La Perouse Sites.

- Based on historical information reviewed as part of the ERM (2020) PSI, there were no apparent on-site sources of PFAS, however the adjacent Caltex Kurnell Site and Botany Bay are considered NSW EPA PFAS investigation sites. Based on the nature of on-site land uses and laboratory analysis of collected samples, it is considered that this isolated occurrence is likely to be indicative of residual impact from imported fill material rather than potential site wide contamination.

- While ERM notes that this isolated occurrence of PFAS is unlikely to pose a risk of harm to identified receptors, it may require further consideration during construction for waste classification / offsite disposal requirements.
- While ERM notes that the completed sampling density during investigation works is insufficient to support waste classification of the Site, based on laboratory analysis of collected soil samples it is the opinion of ERM that fill materials within the Site may be classified as general Solid Waste (GSW) and General Solid Waste – Special Waste Asbestos (GSW-A).
    - Concentrations of benzo(a)pyrene were identified to exceed the hazardous waste classification criteria, however based on field notes this isolated exceedance is considered likely to be associated with historical road infrastructure (bitumen) and not indicative of significant anthropogenic contamination.

8.2.2 Analytical Results - Sediment

Laboratory analysis of collected sediment samples reported concentrations of all CoPCs less than the laboratory limit of reporting (LOR) and / or the assessment criteria within all collected samples with the exception of:

- Nickel which exceeded the adopted screening criteria within sample KU_BH03_3.85 located within the Kurnell Site.
- Sediment samples retuned concentrations of monobutyltin (MBT) higher than the laboratory LOR at both the Kurnell and La Perouse sites. ERM notes that while there is no screening criteria for MTB further assessment may be required to facilitate future waste classification / disposal requirements.

Based on the depth of this sample (3.5 m bgl) it is the opinion of ERM that this is likely to represent natural / background concentrations and not indicative of widespread and / or significant anthropogenic contamination.

ERM further notes that several Organochlorine Pesticides were identified to exceed the adopted screening criteria at both the Kurnell and La Perouse sites, however this is due to LORs being higher than the adopted screening criteria. As all other CoPCs were less than LOR is the opinion of ERM that the risk of Organochlorine Pesticide contamination within the Project Area to identified receptors is likely to be low.

While concentrations of CoPCs within collected sediment samples were less than the adopted screening criteria, due to the limited number of samples collected and reduced sample volumes, additional information will be required for waste classification purposes.

9. UPDATED CONCEPTUAL SITE MODEL

9.1 Updated Conceptual Site Model – Kurnell

Based on the results of the desktop assessment, site inspection and the results of the Targeted Site Investigation detailed above, ERM have updated the below Conceptual Site Model (CSM) for the Kurnell site.

Table 9.1 – Conceptual Site Model - Kurnell

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Uncontrolled fill	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ Concentrations of CoPCs were less than the adopted assessment criteria within all collected soil and sediment samples with the exception of asbestos which was identified in fill materials. ■ Asbestos identified within test pits TP04, TP05 and TP06 located within the Kurnell Site adjacent to Captain Cook Drive. ■ ERM notes that while the risk to potential receptors is likely to be low, further consideration of concentrations of CoPCs in soils / sediments (TRH etc.) may be required for waste classification purposes during construction works. ■ ERM further notes that due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater has not yet been undertaken. Where groundwater sampling is undertaken at a later stage, an update to the Conceptual Site Model, will be provided as an addenda to this report.
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low - Moderate	
	Transport of contaminants through mechanical transport	■ Workers carrying out development, installation or maintenance works within the Project Area. ■ Ecological receptors resulting from disturbance of marine sediments during construction works	Moderate - High	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Historical onsite and surrounding land uses	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ Concentrations of CoPCs were less than the adopted assessment criteria within all collected soil and sediment samples with the exception of asbestos which was identified in fill materials. ■ Asbestos identified within test pits TP04, TP05 and TP06 located within the Kurnell Site adjacent to Captain Cook Drive. ■ ERM notes that while the risk to potential receptors is likely to be low, further consideration of concentrations of CoPCs in soils / sediments (TRH, PFAS etc.) may be required for waste classification purposes during construction works. ■ Sediment samples retuned concentrations of monobutyltin (MBT) higher than LOR. ERM notes that while there is no screening criteria for MTB further consideration may be required for waste classification / disposal requirements. ■ ERM notes that while concentrations of CoPCs in overlying soil material indicate a low – moderate risk of harm to underlying groundwater aquifers, the assessment of groundwater had not been undertaken at the time of this report and will be included as an addenda (including an update to this CSM).
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low - Moderate	
	Transport of contaminants through mechanical transport (during excavation of sediments etc)	■ Workers carrying out development, installation or maintenance works within the Project Area.	Moderate - High	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Hazardous building materials	Inhalation of contaminated dust / fibres.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area	Moderate - High	■ Asbestos identified within test pits TP04, TP05 and TP06 located within the Kurnell Site adjacent to Captain Cook Drive. ■ While this is likely to pose a limited risk to the proposed development, it is the opinion of ERM that a site management plan and / or remediation action plan will be required to outline the required processes and procedures to be implemented to remediate and / or management identified asbestos within the Ste, ■ ERM notes further consideration on the potential nature and extent of asbestos may be required for waste classification purposes during construction works.
	Transport of contaminants through mechanical transport	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Moderate - High	

9.2 Updated Conceptual Site Model – La Perouse

Based on the results of the desktop assessment, site inspection and the potential sources, pathways and receptors identified above ERM developed the below Conceptual Site Model (CSM) for the La Perouse Site.

Table 9.2 – Conceptual Site Model La Perouse

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Uncontrolled fill	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ Concentrations of CoPCs were less than the adopted assessment criteria within all collected soil and sediment samples with the exception of asbestos which was identified in fill materials. ■ Asbestos identified within test pits TP04, TP07 and TP10 located within the La Perouse Site adjacent to Anzac Parade ■ Low concentrations of PFAS (above LOR but less than screening criteria) were identified within surface soils in TPO7. ERM notes that while this is considered unlikely to be indicative of significant or widespread contamination, further consideration may be required for waste classification purposes. ■ ERM notes that while the risk to potential receptors is likely to be low, further consideration of concentrations of CoPCs in soils / sediments (TRH etc.) may be required for waste classification purposes during construction works. ■ ERM notes that while concentrations of CoPCs in overlying soil material indicate a low – moderate risk of harm to underlying groundwater aquifers, the assessment of groundwater had not been undertaken at the time of this report and will be included as an addenda (including an update to this CSM).
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low - moderate	
	Transport of contaminants through mechanical transport	■ Workers carrying out development, installation or maintenance works within the Project Area. ■ Ecological receptors resulting from disturbance of marine sediments during construction works	Moderate - High	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Historical onsite and surrounding land uses	Dermal contact and / or incidental ingestion with contaminated surface waters / soils.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low	■ Concentrations of CoPCs were less than the adopted assessment criteria within all collected soil and sediment samples with the exception of asbestos which was identified in fill materials. ■ Asbestos identified within test pits TP04, TP07 and TP10 located within the La Perouse Site adjacent to Anzac Parade ■ ERM notes that while the risk to potential receptors is likely to be low, further consideration of concentrations of CoPCs in soils / sediments (TRH etc.) may be required for waste classification purposes during construction works. ■ Sediment samples retuned concentrations of MBT higher than LOR. ERM notes that while there is no screening criteria for MTB further consideration may be required for waste classification / disposal requirements. ■ ERM further notes that due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater had not been undertaken. ■ ERM notes that while concentrations of CoPCs in overlying soil material indicate a low – moderate risk of harm to underlying groundwater aquifers, the assessment of groundwater had not been undertaken at the time of this report and will be included as an addenda (including an update to this CSM).
	Transport of contamination through surface water flows.	■ Adjacent sensitive receptors; ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Moderate	
	Transport of contamination to underlying groundwater aquifers	■ Adjacent sensitive receptors; and ■ Future potential on-site users of groundwater.	Low - Moderate	
	Transport of contaminants through mechanical transport (during excavation of sediments etc)	■ Workers carrying out development, installation or maintenance works within the Project Area.	High	

Potential Sources	Pathways	Potential Receptors	Risk of Potentially Complete Pollutant Linkage	Comment
Hazardous building materials	Inhalation of contaminated dust / fibres.	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area	Low - Moderate	■ Asbestos identified within test pits TP04, TP07 and TP10 located within the La Perouse Site adjacent to Anzac Parade areas) should be considered. ■ While this is likely to pose a limited risk to the proposed development, it is the opinion of ERM that a site management plan and / or remediation action plan will be required to outline the required processes and procedures to be implemented to remediate and / or management identified asbestos within the Ste, ■ ERM notes further consideration on the potential nature and extent of asbestos may be required for waste classification purposes during construction works.
	Transport of contaminants through mechanical transport	■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the Project Area.	Low - Moderate	
Unexploded Ordnance	Disturbance during future construction works	■ Workers / site users ■ Ecological receptors	Low - Moderate	■ ERM notes that UXO mapping indicated the area to the east of the Project Area (outside the Project Area boundary) was utilised for Mortar firing. ■ ERM notes that an assessment of UXO was not undertaken as part of this Targeted Site Investigation, however may require further consideration should construction activities be required within areas mapped to contain potential UXO.

10. CONCLUSIONS AND RECOMMENDATIONS

Introduction

ERM was engaged by Arup to undertake a Targeted Site Investigation within the site identified as the Kamay Wharf Project, located in Kurnell and La Perouse, NSW (the Site).

ERM understands Transport for NSW is seeking approval to reinstate the ferry wharves at La Perouse and Kurnell in Botany Bay (the project) under Division 5.2 of the EP&A Act as State significant infrastructure.

- A concept design has been developed for the project, which forms the basis of this assessment. This Targeted Site Investigation has been prepared to support the Environmental Impact Statement (EIS) prepared for the project

Background and Objectives

ERM undertook a PSI within the site, to assess the potential for contamination associated with current and historical land use practices to be present at the Site. Based on the outcomes of the PSI, it was the opinion of ERM that further assessment should be undertaken to provide greater certainty on the potential constraints associated with contamination at the Site. It was recommended that an intrusive investigation of soil, sediment, surface water and groundwater should be undertaken to more accurately assess the contamination status of the Project Area.

The objectives of these works were therefore to undertake a Targeted Site Investigation that refined the current understanding of the Project Area and assisted Arup in assessing potential constraints associated with site contamination that may require consideration prior to or during development of the proposed Kamay Ferry Wharf.

Investigation works were undertaken in general accordance with the ERM (2020) SAQP and involved the excavation of boreholes within offshore locations and test pits within onshore locations at both the Kurnell and La Perouse Sites.

- ERM further notes that due to project timing, this Targeted Site Investigation has been undertaken in a staged approach and as such the assessment of groundwater has not yet been undertaken. Where groundwater sampling is undertaken at a later stage, an update to the Conceptual Site Model, will be provided as an addenda to this report

Results and Conclusions

Based on field observations made during site investigation works, laboratory analysis of collected soil and sediment samples and with reference to the updated CSM presented within Section 9.0, ERM concluded the following:

- Sediments were identified during offshore drilling works to range from 1.2 m to 11.2 m in thickness within the Kurnell and La Perouse sites respectively.
    - Laboratory analysis of collected samples retuned concentrations of CopCs less than the adopted screening criteria with the exception of nickel within one sample. It is the opinion of ERM that identified Nickel concentrations were likely to be indicative of natural / background concentrations.
    - Laboratory analysis of sediment samples retuned concentrations of MBT higher than LOR in all collected samples ranging from 0.75 mg/kg – 3.8 mg/kg. ERM notes that while there are no screening criteria for MBT. MBT falls under the *Chemical Control Order in Relation to Organotin Wastes* (EPA, 1985) and further consideration may be required to waste classification / disposal and dredging purposes.
    - ERM notes that as works were undertaken concurrently with geotechnical works, limited sample volumes were obtained resulting in a reduced analytical suite being analysed.

- While concentrations of CoPCs within collected sediment samples were less than the adopted screening criteria, due to the limited number of samples collected and reduced sample volumes, additional information will be required for waste classification purposes.

- Fill materials within the onshore test pits located at Kurnell and La Perouse sites were identified to contain ACM within several isolated locations.
- Laboratory analysis of collected samples returned concentrations of all other CoPCs less than the adopted screening criteria. ERM notes that concentrations of TRH (within both the Kurnell and La Perouse Sites) and PFAS (La Perouse only) were identified to exceed LOR but less than the screening criteria within several collected soil samples.
  - ERM notes that while these minor elevated concentrations are unlikely to be indicative of significant or widespread anthropogenic contamination or pose a risk to identified receptors, further consideration may be required prior to construction for waste classification purposes.
- While ERM notes that the completed sampling density during investigation works is insufficient to support waste classification of the Site, based on laboratory analysis of collected soil samples it is the opinion of ERM that fill materials within the Site may be classified as general Solid Waste (GSW) and General Solid Waste – Special Waste Asbestos (GSW-A).
  - Concentrations of Benzo (a) Pyrene were identified to exceed the hazardous waste classification criteria, however based on field notes this isolated exceedance is considered likely to be associated with historical road infrastructure (bitumen) and not indicative of significant anthropogenic contamination.
  - ERM notes that prior to construction, further assessment of the site is required to facilitate waste classification requirements.
- The assessment of UXO was not undertaken as part of this Targeted Site Investigation, however this may require further consideration should construction activities be required within areas mapped to contain potential UXO.

Recommendations

Based on the results of this Targeted Site Investigation, ERM recommends the following be additional works be undertaken prior to the commencement of construction works.

- Where groundwater is to be encountered or extracted during future development works, an assessment of groundwater should be completed to further inform the management of potential groundwater issues during construction and subsequent operation of the Site.
- Additional sampling and analysis of soils, sediments and (where necessary) groundwater should be undertaken to aid in the assessment of potential offsite disposal requirements.
- A Construction Environmental Management Plan (CEMP) detailing the require processes / procedures for the excavation, handling, storage and transport of sediments will be required.
- Prior to the commencement of construction works, an Asbestos Management Plan (AMP) and / or Site Management Plan (SMP) will be required to outline the required processes / procedures to be adopted for the remediation and / or management of asbestos within the Site. The AMP should also be developed in consideration of occupational safety / hygiene requirements during remediation and / or subsequent site operations.

The objective of refining the site CSM has been completed, however some further works are required prior to construction. The above recommendations should be carried out to fulfil the SEARs requirements (as outline in Table 10.1), for a formal waste classification of any material to be removed offsite and to provide a management frame work for the identified asbestos, PAH and MBT contamination.

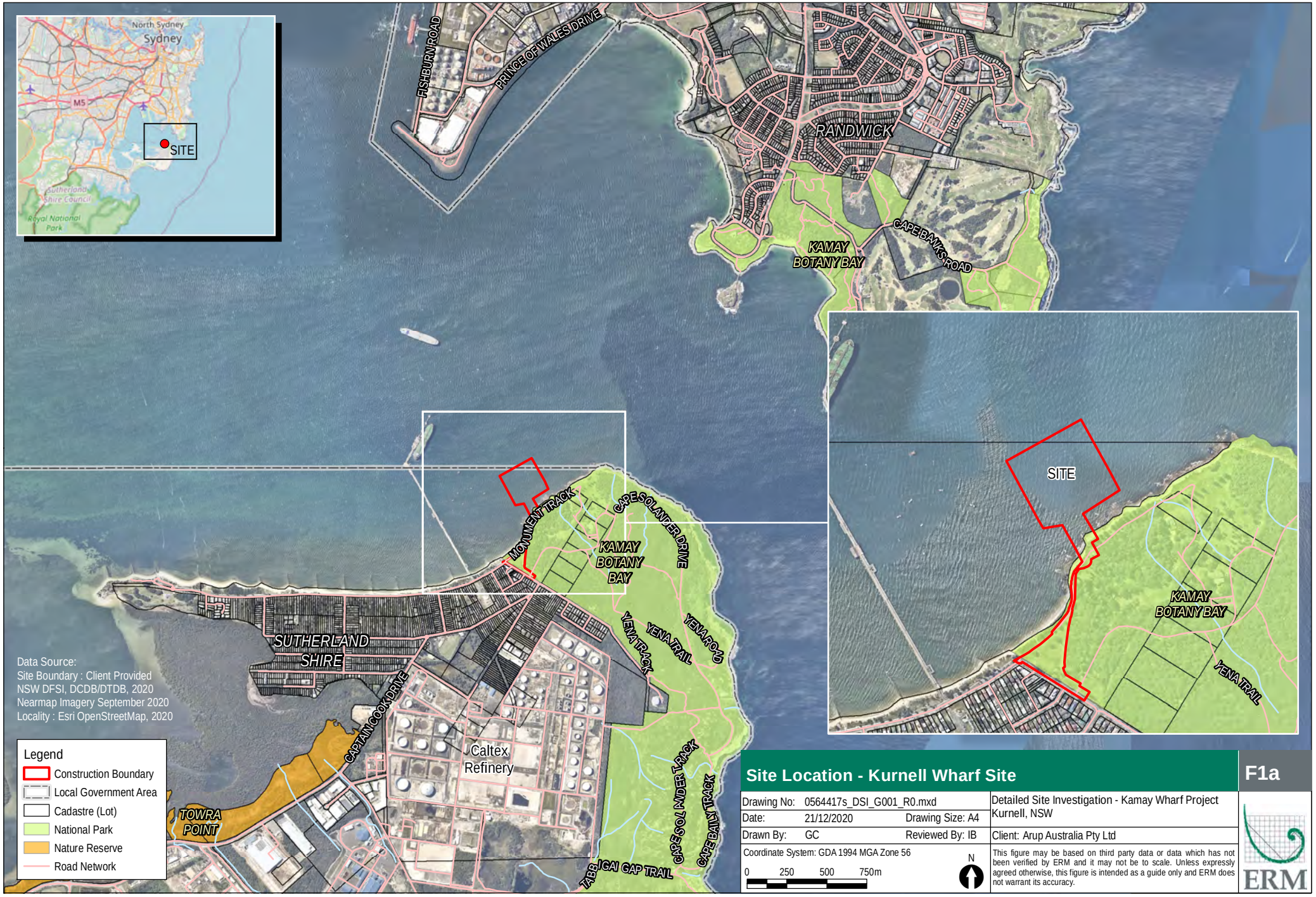
SEARs Checklist

As the TSI was completed in support of compliance with SEARs, an assessment has been completed to detail how the requirements of the SEARs have been addressed as presented below in Table 10.1.

Table 10.1 SEARs Checklist

Condition	Section addressing condition
9. Soil, Water and Contamination The environmental values of land, including soils, subsoils, marine sediments and landforms, are protected. Risks arising from the disturbance and excavation/dredging of land or marine sediments and disposal of materials are minimised, including disturbance to acid sulfate soils, site contamination and water quality (surface and groundwater).	
1. Assess the potential impacts of the project on soil, water and contaminated material and marine sediments, including: (a) acid sulfate soils (including impacts of acidic runoff offsite);	Table 2.2 Areas of the site (particularly off shore) have been identified as high risk of containing ASS material. Material potentially containing ASS is already submerged, mitigating the risk of acidic runoff. Further protection measures will be covered in future management plans.
(b) potential for mobilisation of sediments and any contaminated sediment as a result of dredging and excavation, transportation and disposal of contaminated material/sediments; and	Section 9 The CSM comments on the risk associated with mobile contaminants.
(c) appropriate mitigation and management measures to safeguard the environment and people during construction and operation.	Section 10 – Recommendations Environmental planning documents are required to outline specific contamination mitigation and management measures required.

APPENDIX A FIGURES


North Sydney
Sydney
M5
SITE
Sutherland Shire Council
Royal National Park
FISHBURN ROAD
PRINCE OF WALES DRIVE
RANDWICK
KAMAY BOTANY BAY
CAPE BANKS ROAD
MONUMENT TRACK
CAPE SOLANDER DRIVE
KAMAY BOTANY BAY
YENA TRACK
YENA TRAIL
YENA ROAD
SUTHERLAND SHIRE
CAPTAIN COOK DRIVE
Caltex Refinery
TOWRA POINT
CAPE SOLANDER TRACK
CAPE BAILY TRACK
TABBIGAI GAP TRAIL
SITE
KAMAY BOTANY BAY
YENA TRAIL
Data Source:
Site Boundary : Client Provided
NSW DFSI, DCDB/DTDB, 2020
Nearmap Imagery September 2020
Locality : Esri OpenStreetMap, 2020
Legend
Construction Boundary
Local Government Area
Cadastre (Lot)
National Park
Nature Reserve
Road Network
Site Location - Kurnell Wharf Site
F1a
Drawing No: 0564417s_DSI_G001_R0.mxd
Date: 21/12/2020
Drawing Size: A4
Drawn By: GC
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 250 500 750m
N
Detailed Site Investigation - Kamay Wharf Project
Kurnell, NSW
Client: Arup Australia Pty Ltd
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM

Site Location - La Perouse Wharf Site

F1b

Drawing No:	0564417s_DSI_G002_R0.mxd		Detailed Site Investigation - Kamay Wharf Project La Perouse, NSW
Date:	21/12/2020	Drawing Size: A4	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd

Coordinate System: GDA 1994 MGA Zone 56

0 250 500 750m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

Site Layout - Kurnell Wharf Site

F2a

Drawing No:	0564417s_DSI_G003_R0.mxd		Detailed Site Investigation - Kamay Wharf Project Kurnell, NSW
Date:	21/12/2020	Drawing Size: A3	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd

Coordinate System: GDA 1994 MGA Zone 56

0 25 50 75m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

Site Layout - La Perouse Wharf Site

F2b

Drawing No:	0564417s_DSI_G004_R0.mxd		Detailed Site Investigation - Kamay Wharf Project La Perouse, NSW
Date:	21/12/2020	Drawing Size: A3	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd
Coordinate System: GDA 1994 MGA Zone 56			This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

0 25 50 75m

N

ERM


KU-BH02
KU-BH03
KU-BH01
KU-TP21
KU-TP20
KU-TP14
KU-TP10
KU-TP06
KU-TP05
KU-TP04
KU-TP03
KU-TP02
KAMAY
BOTANY BAY
Legend
Construction Boundary
National Park
Ferry Design (Concept)
Soil Bore
Test Pit
Data Source:
Site Layout : Client Provided
NSW DFSI, DCDB/DTDB, 2020
Nearmap Imagery September 2020
Sampling Locations - Kurnell Wharf Site
F3a
Drawing No: 0564417s_DSI_G005_R0.mxd
Date: 21/12/2020
Drawing Size: A3
Drawn By: GC
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 25 50 75m
N
Detailed Site Investigation - Kamay Wharf Project
Kurnell, NSW
Client: Arup Australia Pty Ltd
This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.
ERM

Sampling Locations - La Perouse Wharf Site

F3b

Drawing No:	0564417s_DSI_G006_R0.mxd		Detailed Site Investigation - Kamay Wharf Project La Perouse, NSW
Date:	21/12/2020	Drawing Size: A3	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd
Coordinate System: GDA 1994 MGA Zone 56		N	This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

0 25 50 75m

ERM

Soil Exceedances - Kurnell Wharf Site

F4a

Drawing No:	0564417s_DSI_G007_R0.mxd		Detailed Site Investigation - Kamay Wharf Project Kurnell, NSW
Date:	21/12/2020	Drawing Size: A3	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd

Coordinate System: GDA 1994 MGA Zone 56

0 25 50 75m

N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

LP-BH01	Depth (m)	Benzo(a) pyrene
	0.1	0.7

LP-TP06	Depth (m)	Benzo(a) pyrene
	0.2	5.4
	0.25	84

Legend
- Construction Boundary
- Cadastre (Lot)
- National Park
- Ferry Design (Concept)
- Soil Bore
- Test Pit
- ACM Detected

Analytes	Benzo(a) pyrene
Units	mg/kg
NEPM (1999) ESL - Commercial/Industrial (coarse)	0.5

Data Source:
Site Layout : Client Provided
NSW DFSI, DCDB/DTDB, 2020
Nearmap Imagery September 2020

Soil Exceedances - La Perouse Wharf Site

F4b

Drawing No:	0564417s_DSI_G008_R0.mxd		Detailed Site Investigation - Kamay Wharf Project La Perouse, NSW
Date:	21/12/2020	Drawing Size: A3	
Drawn By:	GC	Reviewed By: IB	Client: Arup Australia Pty Ltd

Coordinate System: GDA 1994 MGA Zone 56
0 25 50 75m
N

This figure may be based on third party data or data which has not been verified by ERM and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and ERM does not warrant its accuracy.

ERM

APPENDIX B TABLES

			TRH							TPH					BTEX						Metals									Phenols												
			C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	20	20	50	50	50	0.1	0.1	0.1	0.2	0.1	0.3	2	0.4	5	5	5	0.1	5	5	0.5	1	1	0.5	0.5	5	0.5	0.5	0.2	1	5	20	1
NEPM (1999) EIL - Commercial/Industrial																					160				1800																
NEPM (1999) EIL - Urban Residential & Open Space																					100				1100																
NEPM (1999) ESL - Commercial/Industrial (coarse)				170		1700	3300								75	135	165			180																					
NEPM (1999) ESL - Urban Residential & Open Space (coarse)				120		300	2800								50	85	70			105																					
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m					110										0.5	160	55			40																					
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m					240										0.5	220	NL			60																					
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m					440										0.5	310	NL			95																					
NEPM (1999) HSL A&B Residential - VI Sand 4 m+					NL										0.5	540	NL			170																					
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m					NL										NL	NL	NL			NL																					
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m					NL										NL	NL	NL			NL																					
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m					NL										NL	NL	NL			NL																					
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+					NL										NL	NL	NL			NL																					
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m					NL										3	NL	NL			230																					
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m					NL										3	NL	NL			NL																					
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m					NL										3	NL	NL			NL																					
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+					NL										3	NL	NL			NL																					
NEPM (1999) Management Limits - Commercial/Industrial (coarse)				700	1000		3500	10000																																	
NEPM (1999) Management Limits - Urban residential & open space (coarse)				700	1000		2500	10000																																	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																							
BH01_0.1	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	3.6	<0.4	7.3	26	59	0.2	<5	68	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
BH01_0.8	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	5.1	16	<0.1	<5	7.1	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
BH01_1.1	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	9.4	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-BH01-0.1	12/11/2020	757204	<20	<20	<50	<50	180	150	330	<20	<20	97	150	247	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.2	<0.4	14	87	100	<0.1	15	540	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP01-0.1	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	61	61	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.3	<0.4	<5	10	29	<0.1	<5	26	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP01-0.5	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	18	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP01-1.1	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	7.1	<0.1	<5	6.7	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP02_1.0	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	6.8	<0.4	13	<5	<5	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP02-0.1	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	76	76	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	3.2	<0.4	<5	5.2	20	<0.1	<5	17	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP02-0.4	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	8.7	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP02-0.7	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP03_0.2	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5 - 6.8	16 - 17	<0.1	<5	7.9 - 11	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP03_0.7	11/11/2020	757234	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	6.4	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP04-0.2	12/11/2020	757204	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	86	86	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.4	<0.4	<5	<5	16	<0.1	<5	13	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP05-0.2	12/11/2020	757204	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	56	56	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	7.6	23	18	0.1	6.5	48	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP05-0.4	12/11/2020	757204	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	14	51	<5	<0.1	49	59	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP06-0.2	12/11/2020	757204	<20	<20	<50	<50	450	250	700	<20	<20	270	280	550	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	6.1	23	13	<0.1	6.1	35	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP06-0.25	12/11/2020	757204	<200	<200	<2500	<2500	6800	<5000	6800	<200	<1000	4500	3600	8100	<1	<1	<1	<2	<1	<3	3.6	<0.4	12	48	15	<0.1	25	41	<0.5	<1	<1	<0.5	<0.5	<20	<0.5	<0.5	<0.2	<1	<20	<50	<1
LP-TP07-0.1	12/11/2020	757204	<20	<20	<50	<50	220	130	350	<20	<20	120	150	270	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	4.1	0.7	19	140	190	0.1	13	890	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP07-0.2	12/11/2020	757204	<20	<20	<50	<50	190	170	360	<20	<20	110	160	270	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	2.9	0.8	18	150	220	0.1	13	930	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
LP-TP10-0.1	12/11/2020	757204	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	5.2	<0.4	28	30	110	0.4	<5	55	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP02_0.3	2/11/2020	754811	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	9.7	6.5	<0.1	<5	15	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP02_1.1	2/11/2020	754811	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	14	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP03_0.1	2/11/2020	754811	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	53	53	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	14	25	<0.1	<5	33	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP03_0.6	2/11/2020	754811	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP04_0.1	2/11/2020	754811	<20	<20	<50	<50	140	<100	140	<20	25	91	89	205	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	6.5	13	29	<0.1	5.9	49	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP06_0.4	3/11/2020	755093	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	15	<0.1	<5	19	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP10_0.1	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	74	74	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	5.3	<5	20	0.2	<5	20	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP10_1.0	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP14_0.2	3/11/2020	755093	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	11	0.2	<5	15	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP14_0.7	4/11/2020	755061	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	5.1	5.7	<0.1	<5	7.6	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
TP21_0.1	3/11/2020	755093	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	9.9	<0.1	<5	26	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
Statistical Summary																																								
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	6	4	6	0	1	6	12	12	0	0	0	0	0	0	10	2	12	17	27	7	8	23	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1
Minimum Detect			ND	ND	ND	ND	140	130	140	ND	25	91	53	53	ND	ND	ND	ND	ND	ND	2.2	0.7	5.3	5.1	5.7	0.1	5.9	6.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<200	<200	<2500	<2500	6800	<5000	6800	<200	<1000	4500	3600	8100	<1	<1	<1	<2	<1	<3	6.8	0.8	28	150	220	0.4	49	930	<0.5	<1	<1	<0.5	<0.5	<20	<0.5	<0.5	<0.2	<1	<20	<50	<1
Maximum Detect			ND	ND	ND	ND	6800	250	6800	ND	25	4500	3600	8100	ND	ND	ND	ND	ND	ND	6.8	0.8	28	150	220	0.4	49	930	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			13	13	63	63	290	142	312	13	26	182	167	330	0.064	0.064	0.064	0.13	0.064	0.19	1.8	0.23	6.3	21	32	0.08	6	92	0.25	0.5	0.5	0.25	0.25	2.7	0.25	0.25	0.1	0.5	2.7	10	0.5
Median Concentration			10	10	25	25	50	50	50	10	10	25	25	25	0.05	0.05	0.05	0.1	0.05	0.15	1	0.2	2.5	4.875	15	0.05	2.5	16	0.25	0.5	0.5	0.25	0.25	2.5	0.25	0.25	0.1	0.5	2.5	10	0.5
Standard Deviation			16	16	217	217	1191	433	1192	16	87	789	629	1422	0.08	0.08	0.08	0.16	0.08	0.24	1.5	0.14	6.4	37	52	0.074	9.3	234	0	0	0	0	0	1.3	0	0	0	0	1.3	2.7	0
Number of Guideline Exceedances			0	0	1	1	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

								PAH																							Amino Aromatics/Aliphatics					Anilines										
	4-Nitrophenol	Pentachlorophenol	Tetrachlorophenols	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	2-nitroaniline	Aniline	Chlorinated hydrocarbons EPAVic	Other chlorinated hydrocarbons EPAVic	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	5	1	10	0.5	1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) EIL - Commercial/Industrial																									370																				
NEPM (1999) EIL - Urban Residential & Open Space																									170																				
NEPM (1999) ESL - Commercial/Industrial (coarse)																0.7																														
NEPM (1999) ESL - Urban Residential & Open Space (coarse)																0.7																														
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m																									3																				
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m																									NL																				
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m																									NL																				
NEPM (1999) HSL A&B Residential - VI Sand 4 m+																									NL																				
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m																									NL																				
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m																									NL																				
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m																									NL																				
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+																									NL																				
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m																									NL																				
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m																									NL																				
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m																									NL																				
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+																									NL																				
NEPM (1999) Management Limits - Commercial/Industrial (coarse)																																													
NEPM (1999) Management Limits - Urban residential & open space (coarse)																																													
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																												
BH01_0.1	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	0.7	0.6	1.2	<0.5	1.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_0.8	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	0.6	<0.5	<0.5	0.7	0.7	<0.5	2.6	<0.5	<0.5	<0.5	1.7	1.7	1.1	1.4	0.8	9	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_1.1	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-BH01-0.1	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.7	<0.5	0.5	0.7	0.8	<0.5	1	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	1.1	1.4	0.8	5.4	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.1	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.5	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-1.1	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02_1.0	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.1	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.4	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.7	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.2	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.7	11/11/2020	757234	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP04-0.2	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.2	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.4	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.2	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	5.4	4.2	5	5.2	2.3	0.8	3.7	<0.5	2.7	<0.5	<0.5	6.1	7.7	7.7	7.7	37.7	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.25	12/11/2020	757204	<20	<1	<10	<0.5	<1	<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	<5 - 0.9	19	130	120	120	120	690.9	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<5	<5	<5	<5	<5	<5	<5	<5
LP-TP07-0.1	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.6	1.2	<0.5	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP07-0.2	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5	0.6	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.9	1.2	0.6	3.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP10-0.1	12/11/2020	757204	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_0.3	2/11/2020	754811	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_1.1	2/11/2020	754811	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.1	2/11/2020	754811	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.6	2/11/2020	754811	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP04_0.1	2/11/2020	754811	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP06_0.4	3/11/2020	755093	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_0.1	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_1.0	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.2	3/11/2020	755093	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.7	4/11/2020	755061	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP21_0.1	3/11/2020	755093	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary																																													
Number of Results	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	5	3	4	6	4	2	7	1	2	1	2	7	32	32	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<5	<1	<10	<0.5	<1	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	0.9	9	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.5	0.5	2.7	ND	1.7	0.7	0.6	1.2	0.6	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<20	<1	<10	<0.5	<1	<50	<0.5	<0.5	<0.5	<0.5	<1	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	0.9	19	130	120	120	120	690.9	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<5	<5	<5	<5	<5	<5	<5	<5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	0.9	19	130	120	120	120	690.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	2.7	0.5	5	0.25	0.5	10	0.25	0.25	0.25	0.25	0.31	0.32	0.27	0.52	1.8	3.1	2.5	2.3	2.9	1.7	0.63	3.5	0.26	1.4	0.3	0.88	4.6	4.6	5.1	4.3	24	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Median Concentration	2.5	0.5	5	0.25	0.5	10	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation	1.3	0	0	0	0	2.7	0	0	0	0	0.11	0.42	0.11	1.5	8.3	15	12	11	14	7.7	2.1	17	0.044	6.3	0.26	3.3	23	21	21	21	122	0	0	0	0	0	0	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Chlorinated Hydrocarbons																								
			1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1	0.5	0.5	0.5	0.5	0.5	0.5
NEPM (1999) EIL - Commercial/Industrial																											
NEPM (1999) EIL - Urban Residential & Open Space																											
NEPM (1999) ESL - Commercial/Industrial (coarse)																											
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NEPM (1999) HSL A&B Residential - VI Sand 4 m+																											
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m																											
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m																											
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m																											
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+																											
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m																											
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m																											
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m																											
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NEPM (1999) Management Limits - Commercial/Industrial (coarse)																											
NEPM (1999) Management Limits - Urban residential & open space (coarse)																											
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																									
BH01_0.1	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_0.8	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_1.1	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-BH01-0.1	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.1	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.5	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-1.1	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02_1.0	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.1	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.4	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.7	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.2	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.7	11/11/2020	757234	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP04-0.2	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.2	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.4	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.2	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.25	12/11/2020	757204	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<1	<0.5	<5	<5	<5	<5	<5
LP-TP07-0.1	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP07-0.2	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP10-0.1	12/11/2020	757204	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_0.3	2/11/2020	754811	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_1.1	2/11/2020	754811	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.1	2/11/2020	754811	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.6	2/11/2020	754811	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP04_0.1	2/11/2020	754811	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP06_0.4	3/11/2020	755093	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_0.1	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_1.0	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.2	3/11/2020	755093	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.7	4/11/2020	755061	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP21_0.1	3/11/2020	755093	<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary																											
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<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	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	<1	<0.5	<5	<5	<5	<5	<5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.32	0.32	0.32	0.32	0.25	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.25	0.5	0.25	0.32	0.32	0.32	0.32	0.32
Median Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.5	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation			0.4	0.4	0.4	0.4	0	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0	0	0	0.4	0.4	0.4	0.4	0.4
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			Halogenated Benzenes														Halogenated Hydrocarbons					Herbicides			Inorganics
			1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Chlorobenzene	Hexachlorobenzene	Pentachlorobenzene	1,2-dibromoethane	Bromomethane	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	Dinoseb	Pronamide	Trifluralin	Moisture Content (dried @ 103°C)
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.05	0.5	0.5	0.5	0.5	0.5	0.5	20	0.5	0.5	1
NEPM (1999) EIL - Commercial/Industrial																									
NEPM (1999) EIL - Urban Residential & Open Space																									
NEPM (1999) ESL - Commercial/Industrial (coarse)																									
NEPM (1999) ESL - Urban Residential & Open Space (coarse)																									
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m																									
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m																									
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m																									
NEPM (1999) HSL A&B Residential - VI Sand 4 m+																									
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m																									
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m																									
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m																									
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+																									
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m																									
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m																									
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m																									
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+																									
NEPM (1999) Management Limits - Commercial/Industrial (coarse)																									
NEPM (1999) Management Limits - Urban residential & open space (coarse)																									
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																							
BH01_0.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.9
BH01_0.8	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.3
BH01_1.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	13
LP-BH01-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	10
LP-TP01-0.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	9.3
LP-TP01-0.5	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.2
LP-TP01-1.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	8.3
LP-TP02_1.0	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	15
LP-TP02-0.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	11
LP-TP02-0.4	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.3
LP-TP02-0.7	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	11
LP-TP03_0.2	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.5 - 7.4
LP-TP03_0.7	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	13
LP-TP04-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.8
LP-TP05-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.8
LP-TP05-0.4	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.3
LP-TP06-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	5.2
LP-TP06-0.25	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<5	<5	<50	<0.5	<0.5	5.5
LP-TP07-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	14
LP-TP07-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	9.8
LP-TP10-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	8.4
TP02_0.3	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	4.9
TP02_1.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7
TP03_0.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.3
TP03_0.6	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	4.4
TP04_0.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	6.7
TP06_0.4	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	2.6
TP10_0.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	7.5
TP10_1.0	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	5
TP14_0.2	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	8
TP14_0.7	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	3.6
TP21_0.1	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	11
Statistical Summary																									
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
Minimum Concentration			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	2.6
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6
Maximum Concentration			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<0.5	<0.5	<5	<5	<5	<5	<5	<50	<0.5	<0.5	15
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15
Average Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.32	0.32	0.32	0.032	0.25	0.32	0.32	0.32	0.32	0.32	10	0.25	0.25	8.1
Median Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.025	0.25	0.25	0.25	0.25	0.25	0.25	10	0.25	0.25	7.3
Standard Deviation			0	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0.04	0	0.4	0.4	0.4	0.4	0.4	2.7	0	0	3
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			MAH					Nitroaromatics		
			Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene
			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
NEPM (1999) EIL - Commercial/Industrial										
NEPM (1999) EIL - Urban Residential & Open Space										
NEPM (1999) ESL - Commercial/Industrial (coarse)										
NEPM (1999) ESL - Urban Residential & Open Space (coarse)										
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m										
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m										
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m										
NEPM (1999) HSL A&B Residential - VI Sand 4 m+										
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m										
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m										
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m										
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+										
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m										
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m										
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m										
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+										
NEPM (1999) Management Limits - Commercial/Industrial (coarse)										
NEPM (1999) Management Limits - Urban residential & open space (coarse)										
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**								
BH01_0.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_0.8	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH01_1.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-BH01-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-0.5	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP01-1.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02_1.0	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.1	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.4	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP02-0.7	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.2	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP03_0.7	11/11/2020	757234	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP04-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP05-0.4	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP06-0.25	12/11/2020	757204	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
LP-TP07-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP07-0.2	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP-TP10-0.1	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_0.3	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP02_1.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03_0.6	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP04_0.1	2/11/2020	754811	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP06_0.4	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_0.1	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP10_1.0	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.2	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP14_0.7	4/11/2020	755061	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP21_0.1	3/11/2020	755093	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary										
Number of Results			32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0
Minimum Concentration			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<5	<5	<5	<0.5	<0.5	<0.5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.32	0.32	0.32	0.32	0.32	0.25	0.25	0.25
Median Concentration			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation			0.4	0.4	0.4	0.4	0.4	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0

	Organochlorine Pesticides																							
	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.1
NEPM (1999) EIL - Commercial/Industrial											640													
NEPM (1999) EIL - Urban Residential & Open Space											180													
NEPM (1999) ESL - Commercial/Industrial (coarse)																								
NEPM (1999) ESL - Urban Residential & Open Space (coarse)																								
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m																								
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m																								
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m																								
NEPM (1999) HSL A&B Residential - VI Sand 4 m+																								
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m																								
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m																								
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m																								
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+																								
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m																								
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m																								
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m																								
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+																								
NEPM (1999) Management Limits - Commercial/Industrial (coarse)																								
NEPM (1999) Management Limits - Urban residential & open space (coarse)																								
Field_ID																								
BH01_0.1	<0.2	<0.2	<0.05	<0.05	<0.05	0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.5 - 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH01_0.8	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH01_1.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-BH01-0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP01-0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP01-0.5	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP01-1.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP02_1.0	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP02-0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP02-0.4	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP02-0.7	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP03_0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP03_0.7	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP04-0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP05-0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP05-0.4	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP06-0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP06-0.25	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
LP-TP07-0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP07-0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
LP-TP10-0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP02_0.3	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP02_1.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP03_0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP03_0.6	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP04_0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP06_0.4	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP10_0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP10_1.0	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP14_0.2	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP14_0.7	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP21_0.1	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
Statistical Summary																								
Number of Results	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.2	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
Minimum Detect	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<1	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10
Maximum Detect	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.11	0.11	0.032	0.032	0.032	0.033	0.032	0.064	0.032	0.032	0.032	0.032	0.036	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.1	0.2
Median Concentration	0.1	0.1	0.025	0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.1	0.05
Standard Deviation	0.071	0.071	0.04	0.04	0.04	0.04	0.04	0.08	0.04	0.04	0.04	0.04	0.045	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.027	0.88
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate
	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
NEPM (1999) EIL - Commercial/Industrial												
NEPM (1999) EIL - Urban Residential & Open Space												
NEPM (1999) ESL - Commercial/Industrial (coarse)												
NEPM (1999) ESL - Urban Residential & Open Space (coarse)												
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m												
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m												
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m												
NEPM (1999) HSL A&B Residential - VI Sand 4 m+												
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m												
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m												
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m												
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+												
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m												
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m												
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m												
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+												
NEPM (1999) Management Limits - Commercial/Industrial (coarse)												
NEPM (1999) Management Limits - Urban residential & open space (coarse)												
Field_ID												
BH01_0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
BH01_0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
BH01_1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-BH01-0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02_1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP03_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
LP-TP03_0.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP04-0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP05-0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP05-0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP06-0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP06-0.25	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2
LP-TP07-0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP07-0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP10-0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP02_0.3	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP02_1.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP03_0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP03_0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP04_0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP06_0.4	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_1.0	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP14_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
TP14_0.7	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
TP21_0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Statistical Summary												
Number of Results	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.13	0.13	0.13	0.13	0.13	0.13	1.3	0.13	0.13	0.13	0.13	0.13
Median Concentration	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1
Standard Deviation	0.16	0.16	0.16	0.16	0.16	0.16	1.6	0.16	0.16	0.16	0.16	0.16
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0

			Organophosphorous Pesticides																						Pesticides		Phthalates						Solvents					SVOCs											VOCs
			Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Acetophenone	Parathion	Pirimiphos-methyl	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Dibenzofuran	N-nitrosopiperidine	3&4-Methylphenol (m&p-Cresol)	Dibenz[a,j]acridine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	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	0.4	0.5
NEPM (1999) EIL - Commercial/Industrial																																														
NEPM (1999) EIL - Urban Residential & Open Space																																														
NEPM (1999) ESL - Commercial/Industrial (coarse)																																														
NEPM (1999) ESL - Urban Residential & Open Space (coarse)																																														
NEPM (1999) HSL A&B Residential - VI Sand 0 to <1 m																																														
NEPM (1999) HSL A&B Residential - VI Sand 1 to <2 m																																														
NEPM (1999) HSL A&B Residential - VI Sand 2 to <4 m																																														
NEPM (1999) HSL A&B Residential - VI Sand 4 m+																																														
NEPM (1999) HSL C Rec/Open Space - VI Sand 0 to <1 m																																														
NEPM (1999) HSL C Rec/Open Space - VI Sand 1 to <2 m																																														
NEPM (1999) HSL C Rec/Open Space - VI Sand 2 to <4 m																																														
NEPM (1999) HSL C Rec/Open Space - VI Sand 4 m+																																														
NEPM (1999) HSL D Comm/Indust - VI Sand 0 to <1 m																																														
NEPM (1999) HSL D Comm/Indust - VI Sand 1 to <2 m																																														
NEPM (1999) HSL D Comm/Indust - VI Sand 2 to <4 m																																														
NEPM (1999) HSL D Comm/Indust - VI Sand 4 m+																																														
NEPM (1999) Management Limits - Commercial/Industrial (coarse)																																														
NEPM (1999) Management Limits - Urban residential & open space (coarse)																																														
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																													
BH01_0.1	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
BH01_0.8	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
BH01_1.1	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-BH01-0.1	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP01-0.1	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP01-0.5	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP01-1.1	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP02_1.0	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP02-0.1	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP02-0.4	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP02-0.7	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP03_0.2	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP03_0.7	11/11/2020	757234	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP04-0.2	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP05-0.2	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP05-0.4	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP06-0.2	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	0.7
LP-TP06-0.25	12/11/2020	757204	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<0.5	<2	<2	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.4	<0.5
LP-TP07-0.1	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP07-0.2	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
LP-TP10-0.1	12/11/2020	757204	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP02_0.3	2/11/2020	754811	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP02_1.1	2/11/2020	754811	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP03_0.1	2/11/2020	754811	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP03_0.6	2/11/2020	754811	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP04_0.1	2/11/2020	754811	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP06_0.4	3/11/2020	755093	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP10_0.1	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP10_1.0	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP14_0.2	3/11/2020	755093	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP14_0.7	4/11/2020	755061	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
TP21_0.1	3/11/2020	755093	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
Statistical Summary																																														
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Minimum Concentration			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<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	<0.4	<0.5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	0.7
Maximum Concentration			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<0.5	<2	<2	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<5	<5	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.4	0.7
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	ND	ND	0.7
Average Concentration			0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	1.3	0.13	1.3	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.13	0.13	2.5	0.25	0.25	0.25	0.25	0.25	0.32	0.32	0.32	0.32	0.32	0.25	0.25	0.25	0.25	0.25	0.25	0.26	0.25	0.2	0.26
Median Concentration			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.25	0.1	0.1	2.5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.2	0.25
Standard Deviation			0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	1.6	0.16	1.6	0.16	0.16	0.16	0.16	0.16	0.16	0	0.16	0.16	0	0	0	0	0	0	0.4	0.4	0.4	0.4	0.4	0	0	0	0	0	0	0.044	0	0	0.08
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ERM

Table 2. Sediment Analytical Results
Kamay Ferry Wharf Project
Targeted DSI - 0564417

	BTEX																		Metals								TBT			lorine Pesticides			
	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	TRH C6-C10	TRH C6-C10 less BTEX (F1)	>C10 - C16 Fraction	TRH >C10-C16 less Naphthalene (F2)	>C16 - C34 Fraction	>C34 - C40 Fraction	TRH >C10-C40 (total)*	TRH C6-C9	TRH C10-C14	TRH C15-C28	TRH C29-C36	TRH C10-C36 (Total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Monobutyltin as Sn	Dibutyltin as Sn	Tributyltin as Sn	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE	a-BHC
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ng/g	ng/g	ng/g	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.2	0.1	0.3	20	20	50	50	100	100	100	20	20	50	50	50	2	0.4	5	5	5	0.1	5	5				0.1	0.1	0.05	0.05
CSIRO (2013) Sediment Quality Guidelines																			20	1.5	80	65	50	0.15	21	200			9				
CSIRO (2013) Sediment Quality Guidelines - High																			70	10	370	270	220	1	52	410			70				
NEMP V2.0 Draft (2019) HGV - Industrial/commercial																																	
NEMP V2.0 Draft (2019) HGV - Public open space																																	
NEMP V2.0 Draft (2019) HGV - Residential with garden/accessible soil																																	
NEMP V2.0 Draft (2019) HGV - Residential with min opportunities for soil access																																	
NEMP V2.0 Draft (2019) Interim EGV - All land use (indirect exposure)																																	
NEMP V2.0 Draft (2019) Interim EGV - Public open space (direct exposure)																																	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																
KU_BH03_3.85	29/09/2020	749235	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<2	<0.4	5.4	<5	<5	<0.1	<5	<5	0.85	<0.5	<0.5	<0.1	<0.1	<0.05	<0.05
KU_BH03_4.15	30/09/2020	749235	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	7.7	<0.4	63	36	14	<0.1	21	59	0.75	<0.5	<0.5	<0.1	<0.1	<0.05	<0.05
LP_BH03_1.0		750954	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<2	<0.4	6.3	<5	<5	<0.1	<5	<5	-	-	-	<0.1	<0.1	<0.05	<0.05
LP_BH02_2.5	8/10/2020	749763	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<2	<0.4	<5	<5	<5	<0.1	<5	<5	-	-	-	-	-	<0.5	<0.5
LP_BH02_8.2	8/10/2020	749763	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	8.4	<0.4	32	<5	6.7	<0.1	<5	10	-	-	-	<0.1	<0.1	<0.05	<0.05
Statistical Summary																																	
Number of Results	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	1	2	0	1	2	5	3	3	0	0	0	0
Minimum Concentration	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	<2	<0.4	<5	<5	<5	<0.1	<5	<5	0.75	<0.5	<0.5	<0.1	<0.1	<0.05	<0.05
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.7	ND	5.4	36	6.7	ND	21	10	0.75	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<20	<20	<50	<50	<100	<100	<100	<20	<20	<50	<50	<50	8.4	<0.4	63	36	14	<0.1	21	59	0.85	<0.5	<0.5	<0.1	<0.1	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4	ND	63	36	14	ND	21	59	0.85	ND	ND	ND	ND	ND	ND
Average Concentration	0.05	0.05	0.05	0.1	0.05	0.15	10	10	25	25	50	50	50	10	10	25	25	25	3.8	0.2	22	9.2	5.6	0.05	6.2	15				0.05	0.05	0.07	0.07
Median Concentration	0.05	0.05	0.05	0.1	0.05	0.15	10	10	25	25	50	50	50	10	10	25	25	25	1	0.2	6.3	2.5	2.5	0.05	2.5	2.5	0.8	0.25	0.25	0.05	0.05	0.025	0.025
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.9	0	26	15	5	0	8.3	25				0	0	0.1	0.1
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

															SVOC																					
			Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	3&4-Methylphenol (m&p-Cresol)	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.4	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2
CSIRO (2013) Sediment Quality Guidelines						0.0045		0.0014	0.0012		0.0028				0.0027				0.0009																	
CSIRO (2013) Sediment Quality Guidelines - High						0.009		0.007	0.005		0.007				0.06				0.0014																	
NEMP V2.0 Draft (2019) HGV - Industrial/commercial																																				
NEMP V2.0 Draft (2019) HGV - Public open space																																				
NEMP V2.0 Draft (2019) HGV - Residential with garden/accessible soil																																				
NEMP V2.0 Draft (2019) HGV - Residential with min opportunities for soil access																																				
NEMP V2.0 Draft (2019) Interim EGV - All land use (indirect exposure)																																				
NEMP V2.0 Draft (2019) Interim EGV - Public open space (direct exposure)																																				
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																		
KU_BH03_3.85	29/09/2020	749235	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
KU_BH03_4.15	30/09/2020	749235	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
LP_BH03_1.0		750954	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
LP_BH02_2.5	8/10/2020	749763	<0.5	-	<0.5	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	-	-	-	-	-	-	-	-	-	-	-
LP_BH02_8.2	8/10/2020	749763	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
Statistical Summary																																				
Number of Results			5	4	5	4	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	4	4	4
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.5	<0.05	<0.5	<0.1	<0.5	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.07	0.025	0.07	0.05	0.07	0.07	0.07	0.025	0.07	0.07	0.07	0.07	0.07	0.2	0.07	0.07	0.07	0.07	0.07	0.07	0.05	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1
Median Concentration			0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.2	0.025	0.025	0.025	0.025	0.025	0.025	0.05	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1
Standard Deviation			0.1	0	0.1	0	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	4	0	5	5	0	5	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Organophosphorous Pesticides																				SVOCs								VOCs
	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Dibenzofuran	N-nitrosopiperidine	Dibenz(a,j)acridine
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
CSIRO (2013) Sediment Quality Guidelines																														
CSIRO (2013) Sediment Quality Guidelines - High																														
NEMP V2.0 Draft (2019) HGV - Industrial/commercial																														
NEMP V2.0 Draft (2019) HGV - Public open space																														
NEMP V2.0 Draft (2019) HGV - Residential with garden/accessible soil																														
NEMP V2.0 Draft (2019) HGV - Residential with min opportunities for soil access																														
NEMP V2.0 Draft (2019) Interim EGV - All land use (indirect exposure)																														
NEMP V2.0 Draft (2019) Interim EGV - Public open space (direct exposure)																														
Field_ID **Sampled_Date-Time** **Lab_Report_Number**																														
KU_BH03_3.85 29/09/2020 749235	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
KU_BH03_4.15 30/09/2020 749235	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP_BH03_1.0 750954	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP_BH02_2.5 8/10/2020 749763	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
LP_BH02_8.2 8/10/2020 749763	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Statistical Summary																														
Number of Results	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	5	5
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Median Concentration	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Standard Deviation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

			PFOS/PFOA																																		
			10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-ethyl-perfluorooctanesulfonamidoacetic acid	N-methylperfluorooctane sulfonamidoacetic acid	N-Methylperfluorooctanesulfonamidoethanol	Perfluorobutanoic acid (PFBA)	Perfluorodecanesulfonic acid (PFDS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Perfluoropropanesulfonic acid (PFPrS)	Sum of PFAS	Sum of PFAS (WA DER List)	Sum of PFHxS and PFOS	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Perfluorodecanoic acid (PFDA)	Perfluorohexanoic acid (PFHxA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorooctanesulfonic acid (PFOS)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (PFOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorooctanoic acid (PFOA)
			µg/kg	µg/kg	µg/kg	µg/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	mg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg
EQL			5	5	10	10	0.005	5	5	5	5	5	5	5	50	10	5	5	5	5	0.005	5	5	0.005	0.005	5	5	5	5	5	5	5	5	0.01	0.005
NEMP V2.0 Draft (2019) HGV - Industrial/commercial																	20000																				50
NEMP V2.0 Draft (2019) HGV - Public open space																	1000																				10
NEMP V2.0 Draft (2019) HGV - Residential with garden/accessible soil																	9							0.01			10								0.1
NEMP V2.0 Draft (2019) HGV - Residential with min opportunities for soil access																	2000																				20
NEMP V2.0 Draft (2019) Interim EGV - All land use (indirect exposure)																								0.01												
NEMP V2.0 Draft (2019) Interim EGV - Public open space (direct exposure)																								1												10
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																			
BH01_0.1	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
BH01_0.8	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
BH01_1.1	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
KU_BH03_3.85	29/09/2020	749235	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
KU_BH03_4.15	30/09/2020	749235	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP_BH02_2.5	8/10/2020	749763	<5	<5	<10	<10	<0.005	<5	<5	<5	-	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP_BH02_8.2	8/10/2020	749763	<5	<5	<10	<10	<0.005	<5	<5	<5	-	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-BH01-0.1	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP01-0.1	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP01-0.5	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP01-1.1	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP02_1.0	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP02-0.1	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP02-0.4	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP03_0.2	11/11/2020	757234	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP04-0.2	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP05-0.2	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP05-0.4	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP06-0.2	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP06-0.25	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP07-0.1	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	5	<5	<5	<5	<0.005	<5	<5	<0.005	0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP07-0.2	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	8.3	<5	<5	<5	<0.005	<5	<5	<0.005	0.0083	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
LP-TP10-0.1	12/11/2020	757204	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP02_0.3	2/11/2020	754811	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP02_1.1	2/11/2020	754811	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP03_0.1	2/11/2020	754811	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP03_0.6	2/11/2020	754811	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP04_0.1	2/11/2020	754811	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP06_0.4	3/11/2020	755093	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP10_0.1	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP10_1.0	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP14_0.2	3/11/2020	755093	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP14_0.7	4/11/2020	755061	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
TP21_0.1	3/11/2020	755093	<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
Statistical Summary																																					
Number of Results			34	34	34	34	34	34	34	34	32	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	<5	<5	<5	<5	<0.005	<5	<5	<0.005	<0.005	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<5	<5	<10	<10	<0.005	<5	<5	<5	<5	<5	<5	<5	<50	<10	8.3	<5	<5	<5	<0.005	<5	<5	<0.005	0.0083	<5	<5	<5	<5	<5	<5	<5	<5	<0.01	<0.005
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.3	ND	ND	ND	ND	ND	ND	ND	0.0083	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			2.5	2.5	5	5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	5	2.7	2.5	2.5	2.5	0.0025	2.5	2.5	0.0025	0.0027	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.005	0.0025
Median Concentration			2.5	2.5	5	5	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	5	2.5	2.5	2.5	2.5	0.0025	2.5	2.5	0.0025	0.0025	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.005	0.0025
Standard Deviation			0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	0	0	0	0	0	0.0011	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Health Screening Levels Res B (w/w %) Rec C (w/w%) Comm/Ind D (w/w%)	0.001%	0.04%, 0.02%, 0.05%	0.04%, 0.02%, 0.05%

Sample ID	Date	Lab Report	Asbestos in soil		ACM retained on sieve
			AF/FA	Bonded	Bonded
Testpit Samples La Perouse					
LP-TP01-0.1	11/11/2020	757234	nd	nd	--
LP-TP02-0.1	11/11/2020	757234	nd	nd	--
LP-TP02-0.4	11/11/2020	757234	nd	nd	--
LP-TP03_0.2	11/11/2020	757234	nd	nd	--
LP-TP04-0.2	12/11/2020	756487	nd	**detected**	--
LP-TP04-0.2-ACM	12/11/2020	756487	--	--	**detected**
LP-TP05-0.2	12/11/2020	757204	nd	nd	--
LP-TP05-0.4	12/11/2020	757204	nd	nd	--
LP-TP06-0.2	12/11/2020	757204	nd	nd	--
LP-TP06-0.25	12/11/2020	757204	nd	nd	--
LP-TP07-0.1	12/11/2020	757204	nd	nd	--
LP-TP07-0.2	12/11/2020	757204	nd	nd	--
LP-TP07-0.2-ACM	12/11/2020	756487	--	--	**detected**
LP-TP10-0.1	12/11/2020	756487	nd	nd	--
LP-TP10-0.1-ACM	12/11/2020	756487	--	--	**detected**
LP-BH01-0.1-ACM	12/11/2020	756487	--	--	**detected**
LP-BH01-0.1	12/11/2020	756487	nd	nd	--
Testpit Samples Kurnell					
TP02_0.3	2/11/2020	754811	nd	nd	--
TP02_1.1	2/11/2020	754811	nd	nd	--
TP03_0.1	2/11/2020	754811	nd	nd	--
TP03_0.6	2/11/2020	754811	nd	nd	--
TP04_0.1	2/11/2020	754811	nd	nd	--
TP04_0.2	2/11/2020	754811	nd	nd	--
TP04_0.2_acm	2/11/2020	754811	--	--	**detected**
TP05_0.15	3/11/2020	754409	nd	nd	--
TP05_PACM	3/11/2020	754409	--	--	**detected**
TP06_0.4	3/11/2020	754409	nd	nd	--
TP06_0.4	3/11/2020	755093	nd	nd	--
TP06_0.4_ACM	3/11/2020	754409	--	--	**detected**
TP10_0.1	4/11/2020	755061	nd	nd	--
TP14_0.2	3/11/2020	755093	nd	nd	--
TP21_0.1	3/11/2020	755093	nd	nd	--
BH01_0.1	4/11/2020	755061	nd	nd	--
BH01_0.8	4/11/2020	755061	nd	nd	--

			Phenols																			TRH							Metals										
			2,3,4,6-Tetrachlorophenol	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol	2,4-Dinitrophenol	2,6-Dichlorophenol	2-Chlorophenol	2-Methylphenol	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-Nitrophenol	Pentachlorophenol	Tetrachlorophenols	Phenol	Phenols (Total Halogenated)	Phenols (Total Non Halogenated)	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C10-C16 (F2 minus Naphthalene)	C16-C34	C34-C40	C10-C40 (Sum of total)	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Organochlorine pesticides EPAVic	Other organochlorine pesticides EPAVic	4,4-DDE
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	1	1	0.5	0.5	5	0.5	0.5	0.2	1	5	20	1	5	1	10	0.5	1	20	20	20	50	50	100	100	100	2	0.4	5	5	5	0.1	5	5	0.1	0.1	0.05
NSW EPA (2014) General Solid Waste CT1				8000	40						4000								288										100	20			100	4	40				
NSW EPA (2014) General Solid Waste SCC1				14400	72						7200								518										500	100			1500	50	1050				
NSW EPA (2014) Restricted Solid Waste CT2				32000	160						16000								1152										400	80			400	16	160				
NSW EPA (2014) Restricted Solid Waste SCC2				57600	288						28800								2073										2000	400			6000	200	4200				
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																					
BH01_0.1	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	3.6	<0.4	7.3	26	59	0.2	<5	68	<0.2	<0.2	<0.05
BH01_0.8	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	5.1	16	<0.1	<5	7.1	<0.2	<0.2	<0.05
BH01_1.1	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	9.4	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-BH01-0.1	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	180	150	330	2.2	<0.4	14	87	100	<0.1	15	540	<0.2	<0.2	<0.05
LP-TP01-0.1	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	2.3	<0.4	<5	10	29	<0.1	<5	26	<0.2	<0.2	<0.05
LP-TP01-0.5	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	18	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-TP01-1.1	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	7.1	<0.1	<5	6.7	<0.2	<0.2	<0.05
LP-TP02_1.0	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	6.8	<0.4	13	<5	<5	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-TP02-0.1	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	3.2	<0.4	<5	5.2	20	<0.1	<5	17	<0.2	<0.2	<0.05
LP-TP02-0.4	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	8.7	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-TP02-0.7	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-TP03_0.2	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5 - 6.8	16 - 17	<0.1	<5	7.9 - 11	<0.2	<0.2	<0.05
LP-TP03_0.7	11/11/2020	757234	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	6.4	<0.1	<5	<5	<0.2	<0.2	<0.05
LP-TP04-0.2	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	2.4	<0.4	<5	<5	16	<0.1	<5	13	<0.2	<0.2	<0.05
LP-TP05-0.2	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	7.6	23	18	0.1	6.5	48	<0.2	<0.2	<0.05
LP-TP05-0.4	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	14	51	<5	<0.1	49	59	<0.2	<0.2	<0.05
LP-TP06-0.2	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	450	250	700	<2	<0.4	6.1	23	13	<0.1	6.1	35	<0.2	<0.2	<0.05
LP-TP06-0.25	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<20	<0.5	<0.5	<0.2	<1	<20	<50	<1	<20	<1	<10	<0.5	<1	<50	<200	<200	<2500	<2500	6800	<5000	6800	3.6	<0.4	12	48	15	<0.1	25	41	<1	<1	<0.5
LP-TP07-0.1	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	220	130	350	4.1	0.7	19	140	190	0.1	13	890	<0.2	<0.2	<0.05
LP-TP07-0.2	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	190	170	360	2.9	0.8	18	150	220	0.1	13	930	<0.2	<0.2	<0.05
LP-TP10-0.1	12/11/2020	757204	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	5.2	<0.4	28	30	110	0.4	<5	55	<0.2	<0.2	<0.05
TP02_0.3	2/11/2020	754811	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	9.7	6.5	<0.1	<5	15	<0.2	<0.2	<0.05
TP02_1.1	2/11/2020	754811	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	14	<0.1	<5	<5	<0.2	<0.2	<0.05
TP03_0.1	2/11/2020	754811	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	14	25	<0.1	<5	33	<0.2	<0.2	<0.05
TP03_0.6	2/11/2020	754811	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.2	<0.2	<0.05
TP04_0.1	2/11/2020	754811	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	140	<100	140	<2	<0.4	6.5	13	29	<0.1	5.9	49	<0.2	<0.2	<0.05
TP06_0.4	3/11/2020	755093	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	15	<0.1	<5	19	<0.2	<0.2	<0.05
TP10_0.1	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	5.3	<5	20	0.2	<5	20	<0.2	<0.2	<0.05
TP10_1.0	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.2	<0.2	<0.05
TP14_0.2	3/11/2020	755093	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	11	0.2	<5	15	<0.2	<0.2	<0.05
TP14_0.7	4/11/2020	755061	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	5.1	5.7	<0.1	<5	7.6	<0.2	<0.2	<0.05
TP21_0.1	3/11/2020	755093	<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	9.9	<0.1	<5	26	<0.2	<0.2	<0.05

Statistical Summary

Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	4	6	10	2	12	17	27	7	8	23	0	0	0
Minimum Concentration			<0.5	<1	<1	<0.5	<0.5	<5	<0.5	<0.5	<0.2	<1	<5	<20	<1	<5	<1	<10	<0.5	<1	<20	<20	<20	<50	<50	<100	<100	<100	<2	<0.4	<5	<5	<5	<0.1	<5	<5	<0.2	<0.2	<0.05
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	130	140	2.2	0.7	5.3	5.1	5.7	0.1	5.9	6.7	ND	ND	ND
Maximum Concentration			<0.5	<1	<1	<0.5	<0.5	<20	<0.5	<0.5	<0.2	<1	<20	<50	<1	<20	<1	<10	<0.5	<1	<50	<200	<200	<2500	<2500	6800	<5000	6800	6.8	0.8	28	150	220	0.4	49	930	<1	<1	<0.5
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6800	250	6800	6.8	0.8	28	150	220	0.4	49	930	ND	ND	ND
Average Concentration			0.25	0.5	0.5	0.25	0.25	2.7	0.25	0.25	0.1	0.5	2.7	10	0.5	2.7	0.5	5	0.25	0.5	10	13	13	63	63	290	142	312	1.8	0.23	6.3	21	32	0.08	6	92	0.11	0.11	0.032
Median Concentration			0.25	0.5	0.5	0.25	0.25	2.5	0.25	0.25	0.1	0.5	2.5	10	0.5	2.5	0.5	5	0.25	0.5	10	10	10	25	25	50	50	50	1	0.2	2.5	4.875	15	0.05	2.5	16	0.1	0.1	0.025
Standard Deviation			0	0	0	0	0	1.3	0	0	0	0	1.3	2.7	0	1.3	0	0	0	0	2.7	16	16	217	217	1191	433	1192	1.5	0.14	6.4	37	52	0.074	9.3	234	0.071	0.071	0.04
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	0	0	0	0

			Organochlorine Pesticides																					Organophosphorous Pesticides																							
			a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene	Tokuthion	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	EPN	Malathion	Merphos	Methyl parathion
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NSW EPA (2014) General Solid Waste CT1																												4																		
NSW EPA (2014) General Solid Waste SCC1																												7.5																		
NSW EPA (2014) Restricted Solid Waste CT2																												16																		
NSW EPA (2014) Restricted Solid Waste SCC2																												30																		
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																												
BH01_0.1	4/11/2020	755061	<0.05	<0.05	0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.5 - 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH01_0.8	4/11/2020	755061	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
BH01_1.1	4/11/2020	755061	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-BH01-0.1	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-0.1	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-0.5	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP01-1.1	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02_1.0	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.1	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.4	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP02-0.7	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP03_0.2	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP03_0.7	11/11/2020	757234	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP04-0.2	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP05-0.2	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP05-0.4	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP06-0.2	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP06-0.25	12/11/2020	757204	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
LP-TP07-0.1	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP07-0.2	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
LP-TP10-0.1	12/11/2020	757204	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP02_0.3	2/11/2020	754811	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP02_1.1	2/11/2020	754811	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP03_0.1	2/11/2020	754811	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP03_0.6	2/11/2020	754811	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP04_0.1	2/11/2020	754811	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP06_0.4	3/11/2020	755093	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_0.1	4/11/2020	755061	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP10_1.0	4/11/2020	755061	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP14_0.2	3/11/2020	755093	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP14_0.7	4/11/2020	755061	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP21_0.1	3/11/2020	755093	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Statistical Summary																																														
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration			<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Minimum Detect			ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration			<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Maximum Detect			ND	ND	0.05	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration			0.032	0.032	0.033	0.032	0.064	0.032	0.032	0.032	0.032	0.036	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.032	0.1	0.2	0.13	0.13	0.13	0.13	0.13	0.13	1.3	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
Median Concentration			0.025	0.025	0.025	0.025	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.1	0.05	0.1	0.1	0.1	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Standard Deviation			0.04	0.04	0.04	0.04	0.08	0.04	0.04	0.04	0.04	0.045	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.027	0.88	0.16	0.16	0.16	0.16	0.16	0.16	1.6	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

												PAH																									Pesticides		TPH					VOCs
			Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	PAHs (Sum of total)	Parathion	Pirimiphos-methyl	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36	Dibenz[a,j]acridine
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.2	20	20	50	50	50	0.5
NSW EPA (2014) General Solid Waste CT1																					0.8															200			650				10000	
NSW EPA (2014) General Solid Waste SCC1																					10															200			650				10000	
NSW EPA (2014) Restricted Solid Waste CT2																					3.2															800			2600				40000	
NSW EPA (2014) Restricted Solid Waste SCC2																					23															800			2600				40000	
Field_ID	**Sampled_Date-Time**	**Lab_Report_Number**																																										
BH01_0.1	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	0.7	0.6	1.2	<0.5	1.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
BH01_0.8	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	0.6	<0.5	<0.5	0.7	0.7	<0.5	2.6	<0.5	<0.5	<0.5	1.7	1.7	1.1	1.4	0.8	9	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
BH01_1.1	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-BH01-0.1	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	0.7	<0.5	0.5	0.7	0.8	<0.5	1	<0.5	<0.5	<0.5	<0.5	1.1	1.1	1.4	0.8	5.4	<0.2	<0.2	<20	<20	97	150	247	<0.5
LP-TP01-0.1	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	61	61	<0.5
LP-TP01-0.5	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP01-1.1	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP02_1.0	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP02-0.1	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	76	76	<0.5
LP-TP02-0.4	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP02-0.7	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP03_0.2	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP03_0.7	11/11/2020	757234	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP04-0.2	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	86	86	<0.5
LP-TP05-0.2	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	56	56	<0.5
LP-TP05-0.4	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
LP-TP06-0.2	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	84.0	4.2	5	5.2	2.3	0.8	3.7	<0.5	2.7	<0.5	<0.5	6.1	7.7	7.7	7.7	37.7	<0.2	<0.2	<20	<20	270	280	550	0.7
LP-TP06-0.25	12/11/2020	757204	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<0.5	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	<5 - 0.9	19	130	120	120	120	690.9	<2	<2	<200	<1000	4500	3600	8100	<0.5
LP-TP07-0.1	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	0.6	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.7	0.6	1.2	<0.5	1.8	<0.2	<0.2	<20	<20	120	150	270	<0.5
LP-TP07-0.2	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5	0.6	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	0.8	0.9	1.2	0.6	3.5	<0.2	<0.2	<20	<20	110	160	270	<0.5
LP-TP10-0.1	12/11/2020	757204	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP02_0.3	2/11/2020	754811	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP02_1.1	2/11/2020	754811	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP03_0.1	2/11/2020	754811	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	53	53	<0.5
TP03_0.6	2/11/2020	754811	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP04_0.1	2/11/2020	754811	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	25	91	89	205	<0.5
TP06_0.4	3/11/2020	755093	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP10_0.1	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	74	74	<0.5
TP10_1.0	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP14_0.2	3/11/2020	755093	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP14_0.7	4/11/2020	755061	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
TP21_0.1	3/11/2020	755093	<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
Statistical Summary																																													
Number of Results			32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
Number of Detects			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	5	3	4	6	4	2	7	1	2	1	2	7	32	32	5	7	0	0	0	1	6	12	12	1
Minimum Concentration			<0.2	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<0.2	<0.2	<20	<20	<50	<50	<50	<0.5
Minimum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	0.9	9	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.5	0.5	2.7	ND	1.7	0.7	0.6	1.2	0.6	1.5	ND	ND	ND	25	91	53	53	0.7
Maximum Concentration			<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<0.5	<0.5	<0.5	<0.5	<1	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	0.9	19	130	120	120	120	690.9	<2	<2	<200	<1000	4500	3600	8100	0.7
Maximum Detect			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	0.9	9	47	84	67	62	80	44	12	96	0.5	36	0.9	19	130	120	120	120	690.9	ND	ND	ND	25	4500	3600	8100	0.7
Average Concentration			0.13	1.3	0.13	1.3	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.31	0.32	0.27	0.52	1.8	3.1	2.5	2.3	2.9	1.7	0.63	3.5	0.26	1.4	0.3	0.88	4.6	4.6	5.1	4.3	24	0.13	0.13	13	26	182	167	330	0.26
Median Concentration			0.1	1	0.1	1	0.1	0.1	0.1	0.1	0.1	0.1	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.6	1.2	0.25	0.25	0.1	0.1	10	10	25	25	25	0.25
Standard Deviation			0.16	1.6	0.16	1.6	0.16	0.16	0.16	0.16	0.16	0.16	0	0	0	0	0.11	0.42	0.11	1.5	8.3	15	12	11	14	7.7	2.1	17	0.044	6.3	0.26	3.3	23	21	21	21	122	0.16	0.16	16	87	789	629	1422	0.08
Number of Guideline Exceedances			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

APPENDIX C BORELOGS

ARUP

NON-CORED BOREHOLE RECORD

KU-BH02 SHEET 1 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	01-Oct-20 to 06-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -2.65mAHD
		LOCATION	335351.8 E 6236082.7 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING		WATER	DRILLING PENETRATION	GROUNDWATER LEVELS	SAMPLES	FIELD TESTS	DEPTH (R.L.) / m (mAHD)	GROUP SYMBOL	GRAPHIC LOG	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
WB	HW casing	70% Water Return	E	N/A									MARINE DEPOSITS
					1.11m	30/10s N>50**	1 1.00 (-3.65) 1.15	SM		Silty SAND: medium to fine grained, sub-rounded to sub- angular, dark grey, with shell fragments	W	VD	
										Continued as cored borehole			

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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1.0.1.1 AUS NON-CORED LOG (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

ARUP

CORED BOREHOLE RECORD

KU-BH02

SHEET 2
OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	01-Oct-20 to 06-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -2.65mAHD
		LOCATION	335351.8 E 6236082.7 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING | CORE LOSS % | TCR % (Drill rate) | SCR % / (RQD %) | FLUSH RETURN % (TYPE) | SAMPLES & FIELD TESTS | DEPTH (R.L.) m (mAHD) | GRAPHIC LOG | ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components | WEATHERING | ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral) VL L M H VH EH | Is 50 (MPa) | SPACING (mm) RMS 20 40 100 300 1000 | VISUAL LOG | GENERAL DESCRIPTION Angle, Shape, Roughness, Infill, Thickness

HW casing

HQ3

HQ casing

70% Water Return

0% Water Return

UCS = 35.0MPa

UCS = 25.0MPa

1.15 (-3.80)

Continued from borehole

SANDSTONE, medium grained, grey, layered, medium cross-bedded at 5 to 15deg

SW

1.65 (-4.30)

SANDSTONE, medium to coarse grained, orange with grey bands, layered, very thinly cross-bedded at 5deg

2.05: becoming grey with iron staining.

MW

2.51m to 2.58m: iron stained crossbeds at 45deg.

2.73 (-5.38)

SANDSTONE, medium to coarse grained, yellow to orange, layered, very thinly sub-horizontal bedding

MW

3.57 (-6.22)

SANDSTONE, medium to coarse grained, grey, layered, very thinly sub-horizontal bedding

5.45m to 5.68m: dark grey to brown, thinly laminated at 5 to 10deg.

5.67m to 5.72m: irregular carbonaceous veins at 20deg

5.75m to 5.94m: becoming thinly bedded at 10deg.

5.94m to 6.36m: medium to coarse grained, brown, layered, medium bedded at 5deg.

6.36m: becoming very thinly bedded at 10deg.

SW to FR

1.68: BP 5° CN PR RF

2.14: BP 2° CN PR RF
2.19: BP 5° c PR RF =2mm
2.28: BP 2° CN PR RF

2.59: BP 8° CN PR RF
2.68 - 2.73: SM c =50mm clay seam
2.80: BP 5° CN PR RF

2.94: VN 5° =2mm quartz vein

5.00 - 7.07: Note: rock core in corebox (Box 2) iron stained/discoloured over long weekend prior to core photo. HW Casing reamed down to 7.0m.

8.13: BP 2° s PR RF <1mm

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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1.0.2.2 AUS CORED CORE LOGS (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

ARUP

CORED BOREHOLE RECORD

KU-BH02

SHEET 3
OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	01-Oct-20 to 06-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -2.65mAHD
		LOCATION	335351.8 E 6236082.7 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING: HQ3; HQ casing
CORE LOSS %: 0; 0; 0; 6
TCR % (Drill rate): 100; 100; 100; 94
SCR % / (RQD %): 100/(100); 100/(100); 100/(100); 94/(94)
FLUSH RETURN % (TYPE): 0% Water Return
SAMPLES & FIELD TESTS
DEPTH (R.L.) m (mAHD)
GRAPHIC LOG

ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components	DEPTH (R.L.) m (mAHD)	WEATHERING	ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral) VL L M H VH EH	Is 50 (MPa)	SPACING (mm) RMS 20 40 100 300 1000	VISUAL LOG	GENERAL DESCRIPTION Angle, Shape, Roughness, Infill, Thickness
SANDSTONE, medium to coarse grained, grey, layered, very thinly sub-horizontal bedding *(continued)*		SW to FR		A 1.21 D 1.27			
	11.44 (-14.09)						11.28: BP 2° CN PR RF 11.33: BP 2° X VR PR RF <1mm 11.43: BP 10° CN PR RF
SANDSTONE, medium grained, grey, layered, medium bedded at 5 to 10deg 11.84m becoming medium to thinly bedded. 12.32m to 12.43m: 10mm thick beds of brown, fine grained SANDSTONE at 10 to 20deg.		FR		D 1.17 A 1.45			
		HW					13.70: BP 0° c PR <2mm
13.8m: becoming dark grey, thickly laminated with carbonaceous laminates at 2 to 5deg.				D 1.31			
	14.36 (-17.01)						14.36: BP 0° c PR <2mm
SANDSTONE, medium to coarse grained, pale grey, layered, thickly laminated at 5 to 10deg		SW					15.19: BP 0° c PR <2mm
	15.80 (-18.45)			D 1.24			
End of borehole at 15.80m Termination: Target depth							

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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1.0.2.2 AUS CORED CORE LOGS (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

ARUP

NON-CORED BOREHOLE RECORD

KU-BH03 SHEET 1 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	29-Sep-20 to 30-Sep-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.59mAHD
		LOCATION	335307.7 E 6236156.4 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS		SAMPLES	FIELD TESTS	DEPTH (R.L.) m (mAHD)	GROUP SYMBOL	GRAPHIC LOG	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
WB HW casing	50% Water Return	E	N/A		1.00m SPT No recovery 1.45m	1;0,0 N=0	1 2				W		MARINE DEPOSITS 1.45m: drill bit clean
					2.95m SPT 10mm	3;2,4 N=6	2.50 (-7.09) 3	SM		Silty SAND: medium to coarse grained, sub-rounded to sub- angular, dark grey		L	
					4.00m SPT 100mm 4.10m	38;44/150 N>50*	3.85 (-8.44) 4 4.15	SP		SAND: medium to coarse grained, sub-rounded to sub- angular, pale grey		VD	
							5 6 7 8 9 10			Continued as cored borehole			

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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1.0.1.1 AUS NON-CORED LOG (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

ARUP

CORED BOREHOLE RECORD

KU-BH03 SHEET 2 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	29-Sep-20 to 30-Sep-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.59mAHD
		LOCATION	335307.7 E 6236156.4 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING | CORE LOSS % | TCR % (Drill rate) | SCR % / (RQD %) | FLUSH RETURN % (TYPE) | SAMPLES & FIELD TESTS | DEPTH (R.L.) m (mAHD) | GRAPHIC LOG | ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components | WEATHERING | ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral) VL L M H VH EH | Is 50 (MPa) | SPACING (mm) RMS 20 40 100 300 1000 | VISUAL LOG | GENERAL DESCRIPTION Angle, Shape, Roughness, Infill, Thickness

HQ3

HQ casing

Core Loss %	TCR % (Drill rate)	SCR % / (RQD %)	Flush Return % (Type)
0	60	40/(40)	50% Water Return
0	100	100/(100)	
0	100	100/(100)	
0	100	100/(100)	
0	100	100/(100)	100% Water Return
0	100	100/(91)	

UCS = 14.0MPa

UCS = 31.0MPa

4.15 (-8.74)

Continued from borehole

CORE LOSS, Core Loss: 4.15-4.45m

4.45 (-9.04)

SANDSTONE, medium grained, grey, layered, very thinly cross-bedded at 10 to 25deg

5.05m: iron stained bands.

5.62m: becoming orange and iron stained.

6.60 (-11.19)

SANDSTONE, fine to medium grained, grey with dark grey laminations, layered, laminated, cross-bedded at 10deg

8.3m: very thinly bedded.

MW

SW

Is 50 (MPa): A 0.58; D 0.50; D 0.79, A 0.73; D 0.58, A 0.93; D 1.86, D 1.53, A 1.84; A 1.49; D 1.05, A 1.16

9.38: BP 5° CN PR RF
9.44: BP 5° CN PR RF

9.73: BP 5° CN PR RF
9.80: BP 5° C CT PR RF <1mm
9.94: BP 5° CN PR RF

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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1.0.2.2 AUS CORED CORE LOGS (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

ARUP

CORED BOREHOLE RECORD

KU-BH03

SHEET 3
OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	29-Sep-20 to 30-Sep-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	Kurnell, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.59mAHD
		LOCATION	335307.7 E 6236156.4 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING: HQ3; HQ casing
CORE LOSS %: 0; 0; 0; 0
TCR % (Drill rate): 100; 100; 100; 100
SCR % / (RQD %): 100/(91); 100/(100); 100/(100); 100/(100)
FLUSH RETURN % (TYPE): 100% Water Return
SAMPLES & FIELD TESTS
DEPTH (R.L.) m (mAHD)
GRAPHIC LOG

ROCK TYPE
Grain Size, Texture/Fabric, Colour, Minor Components

WEATHERING
ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral)
VL L M H VH EH
Is 50 (MPa)
SPACING (mm) RMS 20 40 100 300 1000
VISUAL LOG

GENERAL DESCRIPTION
Angle, Shape, Roughness, Infill, Thickness

SANDSTONE, fine to medium grained, grey with dark grey laminations, layered, laminated, cross-bedded at 10deg *(continued)*

SW

D 1.37

D 1.10 A 1.48

HW

SW

11.56m: carbonaceous vein.
11.58m to 11.76m: becoming iron stained.

11.78 (-16.37)

SANDSTONE, medium to coarse grained, grey with dark grey laminations, layered, thickly laminated cross-bedded at 5 to 10deg

D 2.60

MW

D 1.56 A 2.00

13.32m: becoming iron stained.

D 1.27

13.84: BP 5° CN PR RF healed
13.85: BP 5° CN PR RF healed
13.86: BP 5° CN PR RF
13.92: BP 5° CN PR RF
13.98: BP 5° CN PR RF healed
14.08: BP 5° CN PR RF

14.36 (-18.95)

End of borehole at 14.36m
Termination: Target depth

NOTES

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ARUP

NON-CORED BOREHOLE RECORD

LP-BH02 SHEET 1 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	07-Oct-20 to 09-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -3.58mAHD
		LOCATION	336480.4 E 6237862.6 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS	SAMPLES	FIELD TESTS	DEPTH (R.L.) m (mAHD)	GROUP SYMBOL	GRAPHIC LOG		SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
WB						1.00 (-4.58)							MARINE DEPOSITS
HW casing	100% Water Return	E	N/A	1.45m SPT No recovery	4;5,7 N=12	2.50 (-6.08)	SP			SAND: medium grained, sub-rounded, pale grey		L to MD	
				2.50m SPT 50mm 2.95m	3;6,9 N=15		SP			SAND: medium grained, sub-rounded, pale grey, with silt, with shell fragments	W	MD	
				4.00m SPT 50mm 4.45m	10;22,24 N=46							D	
				5.50m SPT 450mm 5.95m	10;19,21 N=40	5.50 (-9.08)	ML			Sandy SILT: low plasticity, pale grey, fine to medium grained, sub-rounded sand, with shell fragments	w > PL	VSt	
				7.00m SPT 150mm 7.25m SPT 150mm 7.45m	18;30,20 N=50	7.25 (-10.83)	ML			Sandy SILT: low plasticity, orange mottled red, medium grained, rounded to sub-rounded sand		H	
				8.60m SPT 450mm 9.05m	4;7,10 N=17	8.60 (-12.18)	ML			Sandy clayey SILT: low plasticity, grey mottled dark grey, fine to medium grained, rounded to sub-rounded sand		St	

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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ARUP

NON-CORED BOREHOLE RECORD

LP-BH02 SHEET 2 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	07-Oct-20 to 09-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -3.58mAHD
		LOCATION	336480.4 E 6237862.6 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS	SAMPLES	FIELD TESTS	DEPTH (R.L.) m (mAHD)	GROUP SYMBOL	GRAPHIC LOG		SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
WB HW casing	100% Water Return	E	N/A	10.45m SPT 10mm	1;12,17 N=29	11	ML			Sandy clayey SILT: low plasticity, grey mottled dark grey, fine to medium grained, rounded to sub-rounded sand *(continued)*	w > PL	St	
				11.10m SPT 450mm	30/100s N>50**	11.10 (-14.68) 11.20	ML			Sandy SILT: low plasticity, orange, medium grained, sub-rounded sand		H	RESIDUAL SOIL
										Continued as cored borehole			

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

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CORED BOREHOLE RECORD

LP-BH02 SHEET 3 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	07-Oct-20 to 09-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -3.58mAHD
		LOCATION	336480.4 E 6237862.6 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING | CORE LOSS % | TCR % (Drill rate) | SCR % / (RQD %) | FLUSH RETURN % (TYPE) | SAMPLES & FIELD TESTS | DEPTH (R.L.) m (mAHD) | GRAPHIC LOG | ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components | WEATHERING | ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral) VL L M H VH EH | Is 50 (MPa) | SPACING (mm) RMS | VISUAL LOG | GENERAL DESCRIPTION Angle, Shape, Roughness, Infill, Thickness

HQ3

HQ casing

CORE LOSS %: 0 | 0 | 0 | 0 | 0

TCR % (Drill rate): 100 | 100 | 100 | 100 | 100

SCR % / (RQD %): 93/(93) | 100/(100) | 100/(100) | 100/(100) | 100/(100)

FLUSH RETURN %: 100% Water Return

SAMPLES & FIELD TESTS: UCS = 19.0MPa

11

11.20 (-14.78) — Continued from borehole

SANDSTONE, medium grained, grey, massive

HW

11.45: becoming grey with no iron staining and carbonaceous inclusions.

12

13

MW

14

14.53m to 14.59m: carbonaceous laminations.

HW

14.7m: becoming fresh, thinly bedded.

15

16

FR

16.46m to 16.53m: thickly laminated zone.

16.74m to 16.84m: thickly laminated zone.

16.84 (-20.42)

17

SANDSTONE, medium to coarse grained, grey, massive

17.80 (-21.38)

End of borehole at 17.80m
Termination: Target depth

18

19

20

Is 50 (MPa): D 0.93 | D 1.11 A 1.27 | D 1.26 A 1.23 | D 1.28 A 1.34 | D 1.28 | D 1.39 A 1.53 | D 1.32 | D 1.30 A 1.47 | D 1.47

SPACING (mm) RMS: 20 | 40 | 100 | 300 | 1000

GENERAL DESCRIPTION:
- 13.45: BP 5° CN PR RF
- 13.91: BP 5° CN PR RF
- 14.18: JT 20° CN IR RF
- 14.56: BP 5° s CN IR RF <2mm

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

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ARUP

NON-CORED BOREHOLE RECORD

LP-BH03

SHEET 1

OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	13-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.53mAHD
		LOCATION	336417.6 E 6237852.9 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING				STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS	SAMPLES	FIELD TESTS	DEPTH (R.L.) / m (mAHD)	GROUP SYMBOL	GRAPHIC LOG	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
WB / HW casing	0% Water Return	E	N/A			1 1.00			No recovery			0.70m: drillers note, drilling resistance increasing.

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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ARUP

CORED BOREHOLE RECORD

LP-BH03 SHEET 2 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	13-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.53mAHD
		LOCATION	336417.6 E 6237852.9 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING | CORE LOSS % | TCR % (Drill rate) | SCR % / (RQD %) | FLUSH RETURN % (TYPE) | SAMPLES & FIELD TESTS | DEPTH (R.L.) m (mAHD) | GRAPHIC LOG | ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components | WEATHERING | ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral) VL L M H VH EH | Is 50 (MPa) | SPACING (mm) RMS 20 40 100 300 1000 | VISUAL LOG | GENERAL DESCRIPTION Angle, Shape, Roughness, Infill, Thickness

Depth (m) (mAHD)	Description	Weathering	Is 50 (MPa)	Discontinuities
	Continued from borehole			
1.00 (-5.53)	SANDSTONE, medium grained, grey, massive		D 0.17	
	1.58m: becoming iron stained.	HW	D 0.26; D 0.30; A 0.81; 0.24	2.14: JT 50° s CN PR RF <2mm
2.40 (-6.93)	Core Loss: 2.4-2.75m			
2.75 (-7.28)	2.75m to 3.20m: SPT=1;15,37 N=52.			
2.87 (-7.40)	SAND: medium to coarse grained, sub-rounded to sub- angular, poorly graded, grey			
	SANDSTONE, medium grained, grey with iron staining	XW		
3.20 (-7.73)	Core Loss: 3.2-4.2m			
4.20 (-8.73)	4.20m to 4.30m: SPT=40/100s R HB.			
	SANDSTONE, medium grained, orange, massive			4.38: BP 0° CN PR RF
	4.36m: becoming grey.	XW to HW	D 0.02	4.49: JT 75° s CN PR VR 4.63: JT 75° s PR VR healed 4.82: JT 75° s CN PR VR 4.92: JT 75° s CN PR VR
5.32 (-9.85)	5.20: becoming orange, iron stained.			5.16: JT 50° CN IR VR 5.25: BP 0° CN IR VR 5.33: BP 10° CN PR RF
	SANDSTONE, medium grained, orange and red-grey, layered, thickly laminated		D 0.21; D 0.36	5.70: BP 5° c PR <2mm
5.82 (-10.35)	SANDSTONE, medium grained, grey with iron staining, layered, very thinly bedded at 10deg.	HW to MW	D 0.20; A 0.31; D 0.05; D 1.12	6.04: BP 10° CN PR RF
6.07 (-10.60)	SANDSTONE, medium grained, grey with dark grey bands, layered, thickly laminated to very thinly bedded		D 1.61; A 1.27	
		MW to SW	D 1.39; A 1.26	7.98: BP 2° CN PR RF 8.00: BP 2° CN PR RF
	8.74m to 8.87m: carbonaceous laminates.		D 1.37; A 1.57	8.56: BP 10° X VR PR RF 9.17: BP 0° X PR healed
9.43 (-13.96)	SANDSTONE, medium to coarse grained, grey, layered, thinly bedded	SW	1.22	9.38: BP 0° CN PR RF 9.43: BP 0° X PR healed

DRILLING & CASING: HQ3 to 1.00; HW casing to 2.40; WB to 4.20; HQ3 to 6.07; HQ casing to 10.00

CORE LOSS %: 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100 | 0 | 100

TCR % (Drill rate): 4 | 96 | 0 | 100 | Washboring | 0 | 100 | 0 | 100 | 0 | 100

SCR % / (RQD %): 96 | 0/(0) | 73/(0) | 0/(0) | 0/(0) | 75/(45) | 100/(100) | 100/(99) | 100/(100)

FLUSH RETURN % (TYPE): 0% Water Return | 100% Water Return

SAMPLES & FIELD TESTS: UCS = 7.6MPa; SPT; SPT

NOTES

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JOB 273023

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ARUP

CORED BOREHOLE RECORD

LP-BH03 SHEET 3 OF 3

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	13-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -4.53mAHD
		LOCATION	336417.6 E 6237852.9 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING | STRATA | MATERIAL DESCRIPTION | DISCONTINUITIES

DRILLING & CASING: HQ3; HQ casing

CORE LOSS %: 0; 0; 0

TCR % (Drill rate): 100; 100; 100

SCR % / (RQD %): 100/(100); 100/(100); 100/(100)

FLUSH RETURN % (TYPE): 100% Water Return

SAMPLES & FIELD TESTS

DEPTH (R.L.) m (mAHD)

GRAPHIC LOG

ROCK TYPE
Grain Size, Texture/Fabric, Colour, Minor Components

WEATHERING

ESTIMATED ROCK STRENGTH (● - Axial, ○ - Diametral): VL L M H VH EH

Is 50 (MPa)

SPACING (mm) RMS: 20 40 100 300 1000

VISUAL LOG

DISCONTINUITIES — GENERAL DESCRIPTION
Angle, Shape, Roughness, Infill, Thickness

Depth (mAHD)	ROCK TYPE / Grain Size, Texture/Fabric, Colour, Minor Components	WEATHERING	Is 50 (MPa)	DISCONTINUITIES — GENERAL DESCRIPTION (Angle, Shape, Roughness, Infill, Thickness)
11	SANDSTONE, medium to coarse grained, grey, layered, thinly bedded *(continued)*		A 1.58	
	10.58m: becoming grey, very thinly bedded.			10.73: BP 2° CN PR RF
	11.02m: becoming thinly bedded.		D 1.40	
	11.17m: becoming very thinly bedded.			11.47: JT 5° CN IR RF
12	11.82m to 12.12m: 10mm to 20mm thick dark grey shale inclusions.			11.89: BP 5° CN PR RF
	12.14m to 12.28m: SHALE inclusion, very thinly laminated.			12.14: BP 30° CN PR S
13		SW	A 1.39	
			A 1.22	13.53: BP 2° CN PR RF
14				13.79: BP 0° X VR PR <1mm
				13.98: BP 0° X VR PR <1mm
15 14.95 (-19.48)			A 1.28	14.53: BP 0° X VR PR <1mm
	End of borehole at 14.95m Termination: Target depth			
16				
17				
18				
19				
20				

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

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ARUP

NON-CORED BOREHOLE RECORD

LP-BH04 SHEET 1 OF 2

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	14-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -3.75mAHD
		LOCATION	336451.1 E 6237873.0 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS	SAMPLES	FIELD TESTS	DEPTH (R.L.) m (mAHD)	GROUP SYMBOL	GRAPHIC LOG	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
						1						MARINE DEPOSITS
WB				1.40m SPT 100mm 1.85m	1;0,1 N=1	1.40 (-5.15)						
						2	SP		SAND: medium grained, rounded to sub-rounded, dark grey	W	VL	
				2.90m SPT 450mm 3.35m	1;3,2 N=5	2.90 (-6.65) 3	ML		Sandy SILT: low plasticity, grey, medium grained, rounded to sub-rounded sand			
						4						
				4.40m SPT 450mm 4.85m	1;1,4 N=5	4.40 (-8.15)			Sandy CLAY: high plasticity, grey, coarse grained, rounded to sub-rounded sand, with fine gravel, with shell fragments		S	
						5						
				5.90m SPT 450mm 6.35m	1;30,41 N=71	6	CH					
						7				w > PL		
				7.40m SPT 450mm 7.61m	5;50/60 N>50*	7.40 (-11.15)			Sandy CLAY: high plasticity, grey mottled orange, medium grained, rounded to sub-rounded sand		H	
						8	CH					
				8.90m SPT 450mm 9.35m	2;10,11 N=21 PP=140kPa	8.90 (-12.65) 9			Sandy CLAY: high plasticity, grey mottled red, fine grained sand, with silt			
						10	CH				St to VSt	

HW casing — 100% Water Return — E — N/A

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

JOB 273023

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NON-CORED BOREHOLE RECORD

LP-BH04 SHEET 2 OF 2

CLIENT	Transport for New South Wales	LOGGED BY	JC
PROJECT	Kamay Ferry Wharves Project	CHECKED BY	MVU
		DRILLED DATE	14-Oct-20
CONTRACTOR	Rockwell Drilling Services	ANGLE	Vertical
DRILL MODEL	Hanjin D8	BEARING	-
DRILLER	EM	HOLE DIAMETER	114.3mm
LOCATION	La Perouse, NSW,	MOUNT	Sealift 1 JUB
		GROUND LEVEL	RL -3.75mAHD
		LOCATION	336451.1 E 6237873.0 N
		ELEVATION DATUM	Australian Height Datum (AHD)
		COORDINATE SYSTEM	GDA 1994 MGA Zone 56

DRILLING					STRATA					MATERIAL DESCRIPTION	CONDITION		OBSERVATION
DRILLING & CASING	WATER	DRILLING PENETRATION	GROUNDWATER LEVELS		SAMPLES	FIELD TESTS	DEPTH (R.L.) m (mAHD)	GROUP SYMBOL	GRAPHIC LOG	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	CONSISTENCY	Comments / Penetration Rate
								CH		Sandy CLAY: high plasticity, grey mottled red, fine grained sand, with silt *(continued)*			
					10.40m SPT 450mm	3;8,13 N=21	10.40 (-14.15)						
					10.85m			ML		Sandy clayey SILT: low plasticity, pale brown mottled grey, fine to medium grained, rounded to sub-rounded sand	w > PL	St to VSt	
					11.90m SPT 450mm		11.90 (-15.65)			SANDSTONE, fine to medium grained, grey, very low strength			ROCK
							11.97 (-15.72)			End of borehole completed at 11.97m Termination: Target depth Groundwater: Drilled Over Water			
WB	HW casing	100% Water Return	E	N/A									

NOTES

See explanatory notes for details of abbreviations and basis of descriptions

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1.0.1.1 AUS NON-CORED LOG (AS1726)
\\GLOBAL.ARUP.COM\AUSTRALASIA\SYD\PROJECTS\273000\273023-00 KAMAY FERRY TERMINALS\WORK\INTERNAL\SITE\GEOTECH\GROUND INVESTIGATION - OVERWATER\02 GINT\03_LIBRARY & CORRESPONDANCE FILE\GLB\GINT STD AGS 3_1_V0_0-3 - IN PROGRESS.GLB

APPENDIX D QAQC ASSESSMENT

D1. QUALITY ASSURANCE AND QUALITY CONTROL ASSESSMENT

The objective of this data assessment is to evaluate the quality of data gathered during the investigation detailed in the main body of this report. This process has been undertaken to assess whether the sample data is of a suitable standard to be utilised in this report. The data assessment consists of comparing field and laboratory QA/QC results to documented guidelines. The data assessment has been prepared in accordance with the *NEPC (2013) National Environmental Protection (Assessment of Site Contamination) Measure*. Particular reference is made to the PARCC parameters (precision, accuracy, representativeness, completeness and comparability) in evaluating the data quality.

Table D1. presents the degree of QA/QC pertinent to the field investigations.

Table D1: Field QA/QC Assessment

QA/QC Criterion	Comments
QA/QC program including duplicate samples.	In order to demonstrate the suitability of primary samples analysed, field quality control samples for soil were assessed for the Kamay Wharf Project. The target ratio frequency for intra-laboratory inter-laboratory was 1:20 in accordance with the NEPM (1999). A total of 52 primary soil samples were analysed as part of the sampling field program. Throughout the field program, a total of five intra and three inter-laboratory samples were collected and analysed. This reported ratio is approximately 1:10 for soil intra-laboratory and 1:17 for inter-laboratory samples, which is within the acceptable limits of the NEPM (1999). RPDs for all soil duplicate pairs are presented in *Table D1 (Appendix D)*. RPD exceedances for the soil samples collected during this fieldwork program were reported between the following pairs; ■ LP_BH02_2.5 & D01_201008 ■ TP03_01 & QC101_20201102 ■ TP14_0.7 & QC101_20201104 ■ LP_TP05_0.2 & QC101_20201112 ■ TP03_0.1 & QC201_20201102 ■ TP14_0.7 & QC201_20201104 The RPD results represented are not deemed to indicate deficiencies in the sampling or analysis methodologies utilised or significantly impact upon the integrity of the overall results. However, it is noted that in multiple cases duplicate sample analytical results that were higher than the primary sample analytical result were reported in the dataset. In this instance, the higher value was used for the purposes of assessing the data.
Appropriate decontamination procedures were adopted.	Decontamination procedures were implemented between collection of samples in accordance with ERM's Standard Operating Procedures (SOPs) where applicable. All non-dedicated sampling equipment was decontaminated between sampling locations where designated disposable materials were not used. Decontamination procedures were as follows: ■ washed using a stiff brush; ■ washed in potable (tap) water and brush scrubbing using tap water and a non-phosphate detergent (Decon 90®); ■ rinsed with potable water; and ■ air dried. Rinsates were collected from sampling equipment (eg trowel or shovel) each day of sampling to provide confidence in the decontamination procedure. Rinsate results are

QA/QC Criterion	Comments
	presented in Table D3, Appendix D. All samples analysed were reported as non-detect with the exception of the following; - R01_200929 for TRH C10 - C14, TRH >C10 – C16, TRH C10 – C16 (F2) TRH 10 – C36, and TRH >C10 – C40 - QC501_20201102 for TRH C15 – C28, TRH C29 – C36, TRH C10 – C36, TRH C16 – C34, TRH C34 – C40 and TRH >C10 – C40 These anomalies of concentrations within rinsate samples collected should not be considered to affect overall reliability and usability of the data as the reported exceedances are below the adopted screening criteria. The decontamination procedures employed during the course of the sampling event are considered to be sufficient. Field QAQC measures including the use of new disposable nitrile gloves between samples were considered appropriate to minimise cross-contamination between samples.
All relevant media assessed	All soil samples were collected from either soil bores or excavated test pits, ranging from a depth of 0.1 to 8.2 meters The media sampled is considered relevant and appropriate for the purposes of this assessment.
Appropriateness of sampling strategy	The soil sampling strategies adopted were considered appropriate to meet the project objectives as stated in the main body of this report. The sampling was carried out in accordance with ERM's Standard Operating Procedures and the relevant guidelines.
Trip blank and trip spikes collected	A laboratory prepared soil trip blank and trip spike sample were stored and transported with soil sampling activities for the primary batch of samples. Summary tables for trip blanks are presented in *Table D2 (Appendix D).* Volatile TRH and BTEX compounds were not detected in the trip blank sample submitted. Based on the trip blank analytical results, the likelihood of cross contamination having occurred during transport is low. Trip spike recoveries are presented in Table *D4 (Appendix D).* The trip spike sample was spiked in the laboratory with a known concentration of BTEX. The reported recoveries for the trip spike was within the adopted acceptance limits of 70 - 130% inferring that no significant loss of volatiles from samples occurred during storage and transportation to the laboratory.
Sample collection, handling and transportation procedures.	Soil samples were collected, handled and transported in line with ERM's SOP's. Soil samples were placed in laboratory supplied sample containers, stored in a cool box. All samples collected were forwarded to the NATA accredited laboratory under COC conditions. The methods used to collect the samples, the types of sample containers, preservation techniques and custody protocols were documented appropriately. Samples were taken directly to the laboratory, with the COC information handover between ERM and Eurofins. Confirmation of laboratory analysis was sent via email and another COC form. Samples were received by the primary laboratory with cooling media present, consisting of either ice or ice bricks, indicating that all reasonable endeavours were made to chill samples following sample collection and during transport to the laboratory. The recorded temperature within the sample media was within the acceptable limit.
Field QA/QC plan	The sampling team was suitably qualified and experienced to conduct the required works. Field reports describing the media sampled, any indication of potential contamination, duplicate samples and sampling locations were completed

QA/QC Criterion	Comments
	Field instruments used as part of the investigation sampling were generally appropriately calibrated and used according to the manufacturer's instructions.

Table D2. presents the degree of QA/QC pertinent to the laboratory program.

Table D2: Laboratory QA/QC Assessment

QA/QC Criterion	Comments
Appropriate methodologies used for sample analyses	The laboratories used for the investigation works were NATA accredited Eurofins-MGT (NATA Registration No. 1261) and ALS (NATA Registration No. 825). All laboratory reports were NATA stamped and signed by a NATA signatory. All methodologies were considered appropriate for the identified contaminants of concern in the matrix.
Appropriate Limit of Reporting (LOR)	The laboratory LOR for each analyte is presented in the laboratory reports and summary tables.
Laboratory QA/QC plan	Copies of signed chain of custody forms were returned by the laboratory. The primary laboratory and secondary laboratory were both NATA accredited. It is noted that the majority of the analytical methods completed were generally NATA approved as documented on the laboratory reports. Samples were received and analysed within specified laboratory holding times. The types of QA/QC samples analysed by the laboratory for the documented samples were considered sufficient to assess the precision and accuracy of the laboratory methods used. The statistical data presented in the laboratory QA/QC report was considered adequate in demonstrating the precision and accuracy of the methods used to analyse field samples. Laboratory duplicate RPDs were within the acceptable ranges. Laboratory control spikes, surrogates and matrix spikes were acceptable, with no non-conformances recorded.

Table D3. below summarises the QA/QC results in relation to the data quality indicators of precision, accuracy, representativeness, comparability and completeness for the investigation sampling program.

Table D3: Overall Sampling and Analysis Methodology Assessment

Field Considerations	Laboratory Considerations
Precision Requirements	
The sediment and soil sampling was conducted following ERM's SOPs and any variations from these procedures were documented.	Analysis of the following were reported: ■ Laboratory duplicates; and ■ Field inter-laboratory and intra-laboratory duplicates.
Precision Comments	
No significant variations from ERM's SOPs were noted. Field intra-laboratory samples were commonly reported within the acceptance limits.	
Accuracy Requirements	
The sampling was conducted following ERM's SOPs and any variations from these procedures were documented.	Analysis of the following were reported where applicable: ■ trip blanks; ■ method blanks; ■ matrix spikes; ■ surrogate spikes; and ■ laboratory control samples.
Accuracy Comments	
No significant variations from ERM's SOPs were noted. Laboratory QA/QC samples were reported within the acceptance limits specified in the laboratory reports.	

Field Considerations	Laboratory Considerations
Representativeness Requirements	
Appropriate media were identified and sampled according to ERM SOPs and laboratory standards.	All primary samples were analysed according to the ERM SAQP.
Representativeness Comments	
The number and type of samples collected as part of the field program were collected to assess environmental and human health risks, with samples collected in order to allow these risks to be monitored. The data is considered to be representative and ERM considers that sufficient data is available to establish a suitable assessment of soil and groundwater conditions at the site.	
Comparability Requirements	
The same SOPs were used during each sampling event. All sampling was conducted by an appropriately qualified and experienced sampler. Impacts of climatic conditions on sample integrity were minimised by storing samples in a chilled cooler. The types of samples collected were consistent.	Analytical methods suitable for the target media were used. The laboratory LOR for each analyte is presented in the laboratory reports and summary tables. The same units were used to report analyte concentrations where applicable. Results of laboratory analysis comparable with field screening results where applicable.
Comparability Comments	
Requirements for completeness of the dataset were met. The quality of the dataset and overall outcomes of the investigation were substantial with no non-conformances recorded.	
Completeness Requirements	
All soil and groundwater locations were sampled. The sampling program was conducted following ERM's SOPs and any variations from these procedures were documented as appropriate. All sampling was conducted by an appropriately qualified and experienced sampler. Documentation of field works was provided	All critical samples were analysed. All analytes were analysed according to the *SAQP.* Appropriate analysis methods and laboratory LORs were used. Sample documentation was provided. Sample holding times were generally complied with.
Completeness Comments	
The specified requirements for completeness of the dataset were met. The quality of the dataset and overall outcomes of the investigation were satisfactory for the purpose of the fieldwork undertaken.	

		SDG	8-Oct-20	8-Oct-20		5-Nov-20	5-Nov-20		5-Nov-20	5-Nov-20		16-Nov-20	16-Nov-20		16-Nov-20	16-Nov-20		5-Nov-20	ALSE-Sydney 06-Nov-20		5-Nov-20	ALSE-Sydney 09-Nov-20		16-Nov-20	ALSE-Sydney 18-Nov-20	
		Field ID	LP_BH02_2.5	D01_201008	**RPD**	TP03_0.1	QC101_20201102	**RPD**	TP14_0.7	QC101_20201104	**RPD**	LP-TP05-0.2	QC101_20201112	**RPD**	LP-TP01-0.5	QC101_20201111	**RPD**	TP03_0.1	QC201_20201102	**RPD**	TP14_0.7	QC201_20201104	**RPD**	LP-TP01-0.5	QC201_20201111	**RPD**
		Sampled Date/Time	8/10/2020	8/10/2020		2/11/2020	2/11/2020		4/11/2020	4/11/2020		12/11/2020	12/11/2020		11/11/2020	11/11/2020		2/11/2020	2/11/2020		4/11/2020	4/11/2020		11/11/2020	11/11/2020	
ChemName	**Units**	**EQL**																								
1H,1H,2H,2H-perfluorodecanesulfonic acid	mg/kg	0.005				<0.005	<0.005	0										<0.005								
3&4-Methylphenol (m&p-Cresol)	mg/kg	0.4							<0.4	<0.4	0										<0.4					
Omethoate	mg/kg	2				<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0			<2.0			<2.0		
Pirimiphos-methyl	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Pyrazophos	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Terbufos	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Tetrachlorvinphos	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
pH (F)	pH units	0.1							9.3	9.2	1				6.0	6.0	0				9.3			6.0		
pH (Fox)	pH units	0.1							7.7	7.6	1				2.8	2.8	0				7.7			2.8		
1,2,3-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2,4-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Chlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Asbestos from ACM in Soil	mg/kg					0.0	0.0	0				0.0	0.0	0				0.0								
Benzo(a)pyrene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Pentachlorophenol	mg/kg	1 (Primary): 2 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
Pentachlorophenol	mg/kg	1	<1.0	<1.0	0																					
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	0.0005	0	<0.005	0.0002	0	<0.005	0.0006	0
Perfluorooctanoic acid (PFOA)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
Phenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Sum of PFHxS and PFOS	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	0.0005	0	<0.005	0.0002	0	<0.005	0.0006	0
Benzene	mg/kg	0.1 (Primary): 0.2 (Inter	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.2	0	<0.1	<0.2	0	<0.1	<0.2	0
Toluene	mg/kg	0.1 (Primary): 0.5 (Inter	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
Ethylbenzene	mg/kg	0.1 (Primary): 0.5 (Inter	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
m&p-Xylenes	mg/kg	0.2 (Primary): 0.5 (Inter	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.5	0
o-Xylene	mg/kg	0.1 (Primary): 0.5 (Inter	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
Xylenes	mg/kg	0.3 (Primary): 0.5 (Inter	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.3	0	<0.3	<0.5	0	<0.3	<0.5	0	<0.3	<0.5	0
Naphthalene	mg/kg	0.5 (Primary): 1 (Interla	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Naphthalene	mg/kg	0.5 (Primary): 1 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Vic EPA IWRG 621 OCP (Total)*	mg/kg	0.1				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Vic EPA IWRG 621 Other OCP (Total)*	mg/kg	0.1				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Toxaphene	mg/kg	0.1				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1			<0.1			<0.1		
Mevinphos (Phosdrin)	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Naled (Dibrom)	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Tokuthion	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Trichloronate	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.005 (Primary): 0.0005	<0.005	<0.005	0							<0.005	<0.005	0	<0.005	<0.005	0							<0.005	<0.0005	0
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.005 (Primary): 0.0005	<0.005	<0.005	0							<0.005	<0.005	0	<0.005	<0.005	0							<0.005	<0.0005	0
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.01 (Primary): 0.0005	<0.01	<0.01	0							<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.0005	0
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.005 (Primary): 0.0005	<0.005	<0.005	0							<0.005	<0.005	0	<0.005	<0.005	0							<0.005	<0.0005	0
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluorobutanoic acid (PFBA)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluorononanesulfonic acid (PFNS)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluoropentanoic acid (PFPeA)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Perfluorotridecanoic acid (PFTrDA)	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Sum of PFASs (n=30)*	ug/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0			<50.0			<50.0		
Sum of US EPA PFAS (PFOS + PFOA)*	ug/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
Sum of WA DWER PFAS (n=10)*	ug/kg	10	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0			<10.0			<10.0		
Perfluorobutanesulfonic acid (PFBS)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Perfluorodecanoic acid (PFDA)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Perfluorohexanesulfonic acid (PFHxS)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
Perfluorododecanoic acid (PFDoA)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
Perfluorohexanoic acid (PFHxA)	mg/kg	0.005 (Primary): 0.0002	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
Perfluorononanoic acid (PFNA)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Perfluorooctanesulfonamide (PFOSA)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Perfluoroundecanoic acid (PFUnA)	mg/kg	0.005	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005	<0.005	0	<0.005			<0.005			<0.005		
Bis(2-ethylhexyl) phthalate	mg/kg	5				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0
Bis(2-ethylhexyl) phthalate	mg/kg	0.5	<0.5	<0.5	0																					
Butyl benzyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Diethylphthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Dimethyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Di-n-butyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Di-n-octyl phthalate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2.4-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2.4-Dimethylphenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2.4-Dinitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
2.6-Dichlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2,3,4-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
1,2,3,5-Tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
3-Methylcholanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2,4,5-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Dinoseb	mg/kg	20				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
1,3,5-Trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
1-Chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
1-naphthylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2,4-Dinitrotoluene	mg/kg	0.5 (Primary): 1 (Interla	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<1.0	0	<0.5	<1.0	0
2,6-dinitrotoluene	mg/kg	1				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
2,6-dinitrotoluene	mg/kg	0.5	<0.5	<0.5	0																					
2.3.4.6-Tetrachlorophenol	mg/kg	5	<5.0	<5.0	0																					
2.3.4.6-Tetrachlorophenol	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
2.4.5-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0
2.4.5-Trichlorophenol	mg/kg	1	<1.0	<1.0	0																					
2.4.6-Trichlorophenol	mg/kg	1	<1.0	<1.0	0																					
2.4.6-Trichlorophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0
2-chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2-Chlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2-Methyl-4.6-dinitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
2-Methylnaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2-naphthylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
2-Methylphenol (o-Cresol)	mg/kg	0.2	<0.2	<0.2	0																					
2-Methylphenol (o-Cresol)	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.5	0
2-nitroaniline	mg/kg	1				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0
2-nitroaniline	mg/kg	0.5	<0.5	<0.5	0																					
2-Nitrophenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0
2-Nitrophenol	mg/kg	1	<1.0	<1.0	0																					
2-Picoline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
3,3-Dichlorobenzidine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4-(dimethylamino) azobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4,6-Dinitro-o-cyclohexyl phenol	mg/kg	20				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
4-aminobiphenyl	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4-bromophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4-Chloro-3-methylphenol	mg/kg	1 (Primary): 0.5 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0
4-Chloro-3-methylphenol	mg/kg	1	<1.0	<1.0	0																					
4-chlorophenyl phenyl ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4-Nitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0			<5.0			<5.0		
7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<0.5	0	<0.5	<0.5	0
Acetophenone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Aniline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benzyl chloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Bis(2-chloroethoxy) methane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Bis(2-chloroisopropyl) ether	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Demeton-O	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Demeton-S	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Dibenz(a,j)acridine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Dibenzofuran	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Diphenylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
EPN	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Fensulfothion	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Hexachlorobutadiene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Hexachlorocyclopentadiene	mg/kg	1 (Primary): 2.5 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<2.5	0	<1.0	<2.5	0	<1.0	<2.5	0
Hexachlorocyclopentadiene	mg/kg	0.5	<0.5	<0.5	0																					
Hexachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Nitrobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
N-nitrosodi-n-butylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
N-nitrosodi-n-propylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
N-nitrosopiperidine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Pentachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Pentachloronitrobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Pronamide	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Tetrachlorophenols - Total	mg/kg	10				<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0			<10.0			<10.0		
Total Halogenated Phenol*	mg/kg	1				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0		
Total Non-Halogenated Phenol*	mg/kg	20				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
1,2,4-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,3,5-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4-chlorotoluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Bromobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Isopropylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Styrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1,1,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1,1-trichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1,2,2-tetrachloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1,2-trichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1-dichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,1-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2,3-trichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dibromoethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichloroethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,2-dichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
1,3-dichloropropane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
2-butanone (MEK)	mg/kg	0.5	<0.5	<0.5	0																					
2-butanone (MEK)	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
4-methyl-2-pentanone (MIBK)	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
4-methyl-2-pentanone (MIBK)	mg/kg	0.5	<0.5	<0.5	0																					
Acetone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Allyl chloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Bromochloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Bromodichloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Bromoform	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Bromomethane	mg/kg	0.5	<0.5	<0.5	0																					
Bromomethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
Carbon disulfide	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Carbon tetrachloride	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Chlorodibromomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Chloroethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
Chloroethane	mg/kg	0.5	<0.5	<0.5	0																					
Chloroform	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Chloromethane	mg/kg	0.5	<0.5	<0.5	0																					
Chloromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
cis-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
cis-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Dibromomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Dichlorodifluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
Dichlorodifluoromethane	mg/kg	0.5	<0.5	<0.5	0																					
Dichloromethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Iodomethane	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
TCE	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Tetrachloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Total MAH*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
trans-1,2-dichloroethene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
trans-1,3-dichloropropene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Trichlorofluoromethane	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
Trichlorofluoromethane	mg/kg	0.5	<0.5	<0.5	0																					
Vic EPA IWRG 621 CHC (Total)*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Vic EPA IWRG 621 Other CHC (Total)*	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Vinyl chloride	mg/kg	0.5 (Primary): 5 (Interlab)				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	0
Vinyl chloride	mg/kg	0.5	<0.5	<0.5	0																					
Organic Fibres - Comment	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
ACM - Comment	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
Approximate Sample Mass	g					775.0	751.0	3				778.0	806.0	4				775.0								
Asbestos from FA & AF in Soil	%W/W					0.0	0.0	0				0.0	0.0	0				0.0								
Asbestos Reported Result	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
AF - Comment	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
FA- Comment	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
Mass ACM	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass AF	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass Asbestos in ACM	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass Asbestos in AF	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass Asbestos in FA	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass Asbestos in FA & AF	g					0.0	0.0	0				0.0	0.0	0				0.0								
Mass FA	g					0.0	0.0	0				0.0	0.0	0				0.0								
Respirable Fibres - Comment	Comment					1.0	1.0	0				0.0	1.0	200				1.0								
Synthetic Fibres - Comment	Comment					1.0	1.0	0				1.0	1.0	0				1.0								
Moisture Content (dried @ 103°C)	%	1	18.0	18.0	0	7.3	7.7	5	3.6	3.4	6	7.8	7.2	8	7.2	7.3	1	7.3			3.6			7.2		
Arsenic	mg/kg	2 (Primary): 5 (Interlab)	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<5.0	0	<2.0	<5.0	0	<2.0	<5.0	0
Cadmium	mg/kg	0.4 (Primary): 1 (Interla	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<1.0	0	<0.4	<1.0	0	<0.4	<1.0	0
Chromium	mg/kg	5 (Primary): 2 (Interlab)	**<5.0**	**6.9**	**32**	<5.0	<5.0	0	<5.0	<5.0	0	7.6	7.8	3	<5.0	<5.0	0	<5.0	3.0	0	<5.0	<2.0	0	<5.0	<2.0	0
Copper	mg/kg	5	<5.0	<5.0	0	**14.0**	**10.0**	**33**	5.1	<5.0	2	23.0	20.0	14	<5.0	<5.0	0	**14.0**	**8.0**	**55**	5.1	<5.0	2	<5.0	<5.0	0
Lead	mg/kg	5	<5.0	<5.0	0	25.0	23.0	8	**5.7**	**8.0**	**34**	18.0	20.0	11	18.0	16.0	12	**25.0**	**18.0**	**33**	5.7	6.0	5	18.0	20.0	11
Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	0.1	0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0
Nickel	mg/kg	5 (Primary): 2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	6.5	5.7	13	<5.0	<5.0	0	<5.0	<2.0	0	<5.0	<2.0	0	<5.0	<2.0	0
Zinc	mg/kg	5	<5.0	<5.0	0	33.0	38.0	14	**7.6**	**11.0**	**37**	48.0	46.0	4	<5.0	<5.0	0	33.0	31.0	6	7.6	9.0	17	**<5.0**	**7.0**	**33**
TRH C6-C10	mg/kg	20 (Primary): 10 (Interla	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0
TRH C6-C10 less BTEX (F1)	mg/kg	20 (Primary): 10 (Interla	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0
TRH C6-C9	mg/kg	20 (Primary): 10 (Interla	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<10.0	0	<20.0	<10.0	0	<20.0	<10.0	0
>C10 - C16 Fraction	mg/kg	50	<50.0	<50.0	0							<50.0	<50.0	0	<50.0	<50.0	0							<50.0	<50.0	0
TRH >C10-C16 less Naphthalene (F2)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0
>C16 - C34 Fraction	mg/kg	100	<100.0	<100.0	0							<100.0	<100.0	0	<100.0	<100.0	0							<100.0	<100.0	0
>C34 - C40 Fraction	mg/kg	100	<100.0	<100.0	0							<100.0	<100.0	0	<100.0	<100.0	0							<100.0	<100.0	0
TRH >C10-C40 (total)*	mg/kg	100 (Primary): 50 (Inter	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<50.0	0	<100.0	<50.0	0	<100.0	<50.0	0
TRH C15-C28	mg/kg	50 (Primary): 100 (Inter	<50.0	<50.0	0	<50.0	63.0	23	<50.0	<50.0	0	<50.0	51.0	2	<50.0	<50.0	0	<50.0	<100.0	0	<50.0	<100.0	0	<50.0	<100.0	0
TRH C29-C36	mg/kg	50 (Primary): 100 (Inter	<50.0	<50.0	0	53.0	60.0	12	<50.0	<50.0	0	56.0	68.0	19	<50.0	<50.0	0	53.0	<100.0	0	<50.0	<100.0	0	<50.0	<100.0	0
TRH C10-C14	mg/kg	20 (Primary): 50 (Interla	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<50.0	0	<20.0	<50.0	0	<20.0	<50.0	0
TRH C10-C36 (Total)	mg/kg	50	<50.0	<50.0	0	**53.0**	**123.0**	**80**	<50.0	<50.0	0	**56.0**	**119.0**	**72**	<50.0	<50.0	0	53.0	<50.0	6	<50.0	<50.0	0	<50.0	<50.0	0
TRH >C10-C16	mg/kg	50				<50.0	<50.0	0	<50.0	<50.0	0							<50.0			<50.0					
TRH >C16-C34	mg/kg	100				<100.0	<100.0	0	<100.0	<100.0	0							<100.0			<100.0					
TRH >C34-C40	mg/kg	100				<100.0	<100.0	0	<100.0	<100.0	0							<100.0			<100.0					
Fluoranthene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Fluorene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Acenaphthylene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Anthracene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benz(a)anthracene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (lower bound) *	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(a)pyrene TEQ (medium bound) *	mg/kg	0.5				0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0
Benzo(a)pyrene TEQ (upper bound) *	mg/kg	0.5				1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0	1.2	1.2	0
Benzo(b&j)fluoranthene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(g.h.i)perylene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Benzo(k)fluoranthene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Chrysene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Dibenz(a.h)anthracene	mg/kg	0.5							<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0				<0.5	<0.5	0	<0.5	<0.5	0

SDG																													
Field ID			8-Oct-20 LP_BH02_2.5	8-Oct-20 D01_201008	RPD	5-Nov-20 TP03_0.1	5-Nov-20 QC101_20201102	RPD	5-Nov-20 TP14_0.7	5-Nov-20 QC101_20201104	RPD	16-Nov-20 LP-TP05-0.2	16-Nov-20 QC101_20201112	RPD	16-Nov-20 LP-TP01-0.5	16-Nov-20 QC101_2020111	RPD	5-Nov-20 TP03_0.1	ALSE-Sydney 06-Nov-20 QC201_20201102	RPD	5-Nov-20 TP14_0.7	ALSE-Sydney 09-Nov-20 QC201_20201104	RPD	16-Nov-20 LP-TP01-0.5	ALSE-Sydney 18-Nov-20 QC201_20201111	RPD
Sampled Date/Time			8/10/2020	8/10/2020		2/11/2020	2/11/2020		4/11/2020	4/11/2020		12/11/2020	12/11/2020		11/11/2020	11/11/2020		2/11/2020	2/11/2020		4/11/2020	4/11/2020		11/11/2020	11/11/2020	
Indeno(1.2.3-cd)pyrene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Phenanthrene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Pyrene	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	<0.5	0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
Total PAH*	mg/kg	0.5				<0.5	<0.5	0	<0.5	<0.5	0	**<0.5**	**1.0**	**67**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
4,4-DDE	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
4,4-DDE	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
a-BHC	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
a-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Aldrin	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Aldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Aldrin + Dieldrin	mg/kg	0.05				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Azinophos methyl	mg/kg	0.2 (Primary): 0.05 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
b-BHC	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
b-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Chlordane	mg/kg	0.1 (Primary): 0.05 (Interlab)				<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.05	0	<0.1	<0.05	0	<0.1	<0.05	0
Chlorfenvinphos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Chlorpyrifos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Chlorpyrifos-methyl	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Coumaphos	mg/kg	2				<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0			<2.0			<2.0		
d-BHC	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
d-BHC	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
DDD	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
DDD	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
DDT	mg/kg	1 (Primary): 0.2 (Interlab)				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<0.2	0	<1.0	<0.2	0	<1.0	<0.2	0
DDT	mg/kg	0.5 <0.5	<0.5	<0.5	0																					
DDT	mg/kg	0.05 (Primary): 1 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.2	0	<0.05	<0.2	0
DDT+DDE+DDD	mg/kg	0.05				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Diazinon	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Dichlorvos	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Dieldrin	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Dieldrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Dimethoate	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Disulfoton	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Endosulfan I	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endosulfan I	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Endosulfan II	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endosulfan II	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Endosulfan sulphate	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endosulfan sulphate	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Endrin	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endrin	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Endrin aldehyde	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endrin aldehyde	mg/kg	0.05				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Endrin ketone	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Endrin ketone	mg/kg	0.05				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Ethion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Ethoprop	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Fenitrothion	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Fenthion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
g-BHC (Lindane)	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
g-BHC (Lindane)	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Heptachlor	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Heptachlor	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Heptachlor epoxide	mg/kg	0.5 (Primary): 0.05 (Int	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Heptachlor epoxide	mg/kg	0.05 (Primary): 0.5 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Hexachlorobenzene	mg/kg	0.5 (Primary): 1 (Interla	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.05	0	<0.5	<0.05	0	<0.5	<0.05	0
Hexachlorobenzene	mg/kg	0.05 (Primary): 1 (Interlab)				<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
Malathion	mg/kg	0.2 (Primary): 0.5 (Interlab)				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.05	0	<0.2	<0.05	0	<0.2	<0.05	0
Methoxychlor	mg/kg	0.5 (Primary): 0.2 (Inter	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.2	0	<0.5	<0.2	0	<0.5	<0.2	0
Methoxychlor	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Methyl parathion	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Monocrotophos	mg/kg	2 (Primary): 0.2 (Interlab)				<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<0.2	0	<2.0	<0.2	0	<2.0	<0.2	0
Parathion	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0
Phorate	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Ronnel	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Trifluralin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Bolstar (Sulprofos)	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		
Merphos	mg/kg	0.2				<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2		

Field Blanks (SOIL)
Filter: ALL

SDG	8-Oct-20	5-Nov-20	5-Nov-20	5-Nov-20	16-Nov-20	16-Nov-20
Field ID	TB	QC301_20201102	QC301_20201104 (TB)	QC301_20201103	QC301_20201112 (TRIP BLANK)	QC301_2020111 (TB)
Sampled_Date/Time	29/09/2020	2/11/2020	4/11/2020	3/11/2020	12/11/2020	11/11/2020
Sample Type	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B

Chem_Group	ChemName	Units	EQL						
	Benzene	mg/kg	0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
NA	Toluene	mg/kg	0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
	Ethylbenzene	mg/kg	0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
Volatile	m&p-Xylenes	mg/kg	0.2	<0.2	<0.002	<0.002	<0.002	<0.002	<0.002
	o-Xylene	mg/kg	0.1	<0.1	<0.001	<0.001	<0.001	<0.001	<0.001
	Xylenes	mg/kg	0.3	<0.3	<0.003	<0.003	<0.003	<0.003	<0.003
Naphthalene	Naphthalene	mg/kg	0.5	<0.5	<10	<10	<10	<10	<10
Organic	TRH C6-C10	mg/kg	1	<20	<0.02	<0.02	<0.02	<0.02	<0.02
	TRH C6-C10 less BTEX (F1)	mg/kg	10	<20	<0.02	<0.02	<0.02	<0.02	<0.02
	TRH C6-C9	mg/kg	1	<20	<0.02	<0.02	<0.02	<0.02	<0.02

Field Blanks (WATER)
Filter: ALL

SDG	8-Oct-20	8-Oct-20	8-Oct-20	5-Nov-20	5-Nov-20	5-Nov-20	16-Nov-20	16-Nov-20
Field ID	R01_200929	R01_200930	R01_201008	QC501_20201102	QC501_20201104	QC501_20201103	QC501_20201112	QC501_20201111
Sampled_Date/Time	29/09/2020	30/09/2020	8/10/2020	2/11/2020	4/11/2020	3/11/2020	12/11/2020	11/11/2020
Sample Type	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate

Chem_Group	ChemName	Units	EQL								
	1H,1H,2H,2H-perfluorodecanesulfonic acid	ng/l	10				<10				
	3&4-Methylphenol (m&p-Cresol)	mg/l	0.006					<0.006			
	Omethoate	µg/l	2				<2	<2	<2	<2	<2
	Pirimiphos-methyl	mg/l	0.02				<0.02	<0.02	<0.02	<0.02	<0.02
	Pyrazophos	µg/l	2				<2	<2	<2	<2	<2
	Terbufos	µg/l	2				<2	<2	<2	<2	<2
	Tetrachlorvinphos	mg/l	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated HCs	1,2,3-trichlorobenzene	µg/l	5				<5	<5	<5	<5	<5
	1,2,4-trichlorobenzene	µg/l	0.002				<2	<2	<2	<2	<2
	1,2-dichlorobenzene	µg/l	0.001				<2	<2	<2	<2	<2
	1,3-dichlorobenzene	µg/l	0.002				<2	<2	<2	<2	<2
	1,4-dichlorobenzene	µg/l	0.002				<2	<2	<2	<2	<2
	Chlorobenzene	µg/l	1				<1	<1	<1	<1	<1
Metals	Arsenic	µg/l	0.001	<1	<1	<1	<1	<1	<1	<1	<1
	Cadmium	µg/l	0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Chromium	µg/l	0.001	<1	<1	<1	<1	<1	<1	<1	<1
	Copper	µg/l	0.001	<1	<1	<1	<1	<1	<1	<1	<1
	Lead	µg/l	0.001	<1	<1	<1	<1	<1	<1	<1	<1
	Mercury	µg/l	0.0001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Nickel	µg/l	0.001	<1	<1	<1	<1	<1	<1	<1	<1
	Zinc	µg/l	0.005	<5	<5	<5	<5	<5	<5	<5	<5
NA	Toluene	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Benzene	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Benzo(a)pyrene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Ethylbenzene	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Pentachlorophenol	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	Perfluorooctane sulfonic acid (PFOS)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Perfluorooctanoic acid (PFOA)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Phenol	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	Xylenes	mg/kg	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	TRH >C10-C16	mg/kg	0.05				<0.05	<0.05	<0.05		
	TRH >C16-C34	mg/kg	0.1				**0.8**	<0.1	<0.1		
	TRH >C34-C40	mg/kg	0.1				**0.3**	<0.1	<0.1		
Naphthalene	Naphthalene	µg/l	0.001	<10	<10	<10	<10	<10	<10	<10	<10
OCP	Vic EPA IWRG 621 OCP (Total)*	mg/kg	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
	Vic EPA IWRG 621 Other OCP (Total)*	mg/kg	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
OCs	Toxaphene	µg/l	1				<1	<1	<1	<1	<1
OPs	Mevinphos (Phosdrin)	µg/l	0.002				<2	<2	<2	<2	<2
	Naled (Dibrom)	µg/l	2				<2	<2	<2	<2	<2
	Tokuthion	µg/l	2				<2	<2	<2	<2	<2
	Trichloronate	µg/l	2				<2	<2	<2	<2	<2
Organic	TRH C6-C10	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	TRH C6-C10 less BTEX (F1)	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	TRH C6-C9	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
	TRH >C10-C16 less Naphthalene (F2)	mg/kg	0.05	**0.12**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	TRH >C10-C40 (total)*	mg/kg	0.1	**0.12**	<0.1	<0.1	**1.1**	<0.1	<0.1	<0.1	<0.1
PAH	Fluoranthene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Fluorene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Acenaphthene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Acenaphthylene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Anthracene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Benz(a)anthracene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Benzo(b&j)fluoranthene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Benzo(g.h.i)perylene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Benzo(k)fluoranthene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Chrysene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Dibenz(a.h)anthracene	mg/kg	0.001					<0.001	<0.001	<0.001	<0.001
	Indeno(1.2.3-cd)pyrene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Phenanthrene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Pyrene	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Total PAH*	mg/kg	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
Pesticides	4,4-DDE	µg/l	0.0001				<2	<2	<2	<2	<2
	a-BHC	µg/l	0.0001				<2	<2	<2	<2	<2
	Aldrin	µg/l	0.0001				<2	<2	<2	<2	<2
	Aldrin + Dieldrin	µg/l	0.2				<0.2	<0.2	<0.2	<0.2	<0.2
	Azinophos methyl	µg/l	2				<2	<2	<2	<2	<2
	b-BHC	µg/l	0.0001				<2	<2	<2	<2	<2
	Chlordane	µg/l	0.002				<2	<2	<2	<2	<2
	Chlorfenvinphos	µg/l	2				<2	<2	<2	<2	<2
	Chlorpyrifos	µg/l	20				<20	<20	<20	<20	<20
	Chlorpyrifos-methyl	µg/l	2				<2	<2	<2	<2	<2
	Coumaphos	µg/l	20				<20	<20	<20	<20	<20
	d-BHC	µg/l	0.0001				<2	<2	<2	<2	<2
	DDD	µg/l	0.0001				<2	<2	<2	<2	<2
	DDT	µg/l	0.0001				<4	<4	<4	<4	<4
	DDT+DDE+DDD	µg/l	0.2				<0.2	<0.2	<0.2	<0.2	<0.2
	Diazinon	µg/l	0.002				<2	<2	<2	<2	<2
	Dichlorvos	µg/l	2				<2	<2	<2	<2	<2
	Dieldrin	µg/l	0.0001				<2	<2	<2	<2	<2
	Dimethoate	µg/l	0.002				<2	<2	<2	<2	<2
	Disulfoton	µg/l	2				<2	<2	<2	<2	<2
	Endosulfan I	µg/l	0.0001				<2	<2	<2	<2	<2
	Endosulfan II	µg/l	0.0001				<2	<2	<2	<2	<2
	Endosulfan sulphate	µg/l	0.0001				<2	<2	<2	<2	<2
	Endrin	µg/l	0.0001				<2	<2	<2	<2	<2
	Endrin aldehyde	µg/l	0.0001				<2	<2	<2	<2	<2
	Endrin ketone	µg/l	0.0001				<2	<2	<2	<2	<2
	Ethion	µg/l	0.002				<2	<2	<2	<2	<2
	Ethoprop	µg/l	2				<2	<2	<2	<2	<2
	Fenitrothion	µg/l	0.002				<2	<2	<2	<2	<2
	Fenthion	µg/l	2				<2	<2	<2	<2	<2
	g-BHC (Lindane)	µg/l	0.0001				<2	<2	<2	<2	<2
	Heptachlor	µg/l	0.0001				<2	<2	<2	<2	<2
	Heptachlor epoxide	µg/l	0.0001				<2	<2	<2	<2	<2
	Hexachlorobenzene	µg/l	0.0001				<2	<2	<2	<2	<2
	Malathion	µg/l	2				<2	<2	<2	<2	<2
	Methoxychlor	µg/l	0.0002				<5	<5	<5	<5	<5
	Methyl parathion	µg/l	0.002				<2	<2	<2	<2	<2
	Monocrotophos	µg/l	2				<2	<2	<2	<2	<2
	Parathion	µg/l	2				<2	<2	<2	<2	<2
	Phorate	µg/l	2				<2	<2	<2	<2	<2
	Ronnel	µg/l	2				<2	<2	<2	<2	<2
	Trifluralin	ug/L	5				<5	<5	<5	<5	<5
	Bolstar (Sulprofos)	µg/l	2				<2	<2	<2	<2	<2
	Merphos	mg/l	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
PFOS and PFOA	Perfluorobutanesulfonic acid (PFBS)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorodecanesulfonic acid (PFDS)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorodecanoic acid (PFDA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorohexanesulfonic acid (PFHxS)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorododecanoic acid (PFDoA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluoroheptanoic acid (PFHpA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorohexanoic acid (PFHxA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorononanoic acid (PFNA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10
	Perfluorooctanesulfonamide (PFOSA)	ng/l	50	<50	<50	<50	<50	<50	<50	<50	<50
	Perfluoroundecanoic acid (PFUnA)	ng/l	10	<10	<10	<10	<10	<10	<10	<10	<10

Field Blanks (WATER)
Filter: ALL

			SDG	8-Oct-20	8-Oct-20	8-Oct-20	5-Nov-20	5-Nov-20	5-Nov-20	16-Nov-20	16-Nov-20
			Field ID	R01_200929	R01_200930	R01_201008	QC501_20201102	QC501_20201104	QC501_20201103	QC501_20201112	QC501_20201111
			Sampled_Date/Time	29/09/2020	30/09/2020	8/10/2020	2/11/2020	4/11/2020	3/11/2020	12/11/2020	11/11/2020
			Sample Type	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate	Rinsate
SVOC	Bis(2-ethylhexyl) phthalate	µg/l	20				<20	<20	<20	<20	<20
	Butyl benzyl phthalate	µg/l	2				<2	<2	<2	<2	<2
	Diethylphthalate	µg/l	2				<2	<2	<2	<2	<2
	Dimethyl phthalate	µg/l	2				<2	<2	<2	<2	<2
	Di-n-butyl phthalate	µg/l	2				<5	<5	<5	<2	<2
	Di-n-octyl phthalate	µg/l	2				<2	<2	<2	<2	<2
	2.4-Dichlorophenol	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	2.4-Dimethylphenol	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	2.4-Dinitrophenol	mg/kg	0.03				<0.03	<0.03	<0.03	<0.03	<0.03
	2.6-Dichlorophenol	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	1,2,3,4-tetrachlorobenzene	mg/l	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	1,2,3,5-Tetrachlorobenzene	mg/l	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	3-Methylcholanthrene	mg/kg	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
	1,2,4,5-tetrachlorobenzene	µg/l	2				<2	<2	<2	<2	<2
	Dinoseb	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1
	1,3,5-Trichlorobenzene	µg/l	0.005				<5	<5	<5	<5	<5
	1-Chloronaphthalene	µg/l	5				<5	<5	<5	<5	<5
	1-naphthylamine	µg/l	2				<2	<2	<2	<2	<2
	2,4-Dinitrotoluene	µg/l	0.005				<5	<5	<5	<5	<5
	2,6-dinitrotoluene	µg/l	4				<4	<4	<4	<4	<4
	2.3.4.6-Tetrachlorophenol	mg/kg	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
	2.4.5-Trichlorophenol	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	2.4.6-Trichlorophenol	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	2-chloronaphthalene	µg/l	2				<2	<2	<2	<2	<2
	2-Chlorophenol	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	2-Methyl-4.6-dinitrophenol	mg/kg	0.03				<0.03	<0.03	<0.03	<0.03	<0.03
	2-Methylnaphthalene	mg/kg	0.002				<0.002	<0.002	<0.002	<0.002	<0.002
	2-naphthylamine	µg/l	2				<2	<2	<2	<2	<2
	2-Methylphenol (o-Cresol)	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	2-nitroaniline	µg/l	4				<4	<4	<4	<4	<4
	2-Nitrophenol	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	2-Picoline	µg/l	5				<5	<5	<5	<5	<5
	3,3-Dichlorobenzidine	µg/l	5				<5	<5	<5	<5	<5
	4-(dimethylamino) azobenzene	µg/l	2				<2	<2	<2	<2	<2
	4,6-Dinitro-o-cyclohexyl phenol	µg/l	0.1				<100	<100	<100	<100	<100
	4-aminobiphenyl	µg/l	2				<2	<2	<2	<2	<2
	4-bromophenyl phenyl ether	µg/l	2				<2	<2	<2	<2	<2
	4-Chloro-3-methylphenol	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	4-chlorophenyl phenyl ether	µg/l	2				<2	<2	<2	<2	<2
	4-Nitrophenol	mg/kg	0.03				<0.03	<0.03	<0.03	<0.03	<0.03
	7,12-dimethylbenz(a)anthracene	µg/l	2				<2	<2	<2	<2	<2
	Acetophenone	µg/l	2				<2	<2	<2	<2	<2
	Aniline	µg/l	2				<2	<2	<2	<2	<2
	Benzyl chloride	mg/l	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	Bis(2-chloroethoxy) methane	µg/l	2				<2	<2	<2	<2	<2
	Bis(2-chloroisopropyl) ether	µg/l	2				<2	<2	<2	<2	<2
	Demeton-O	µg/l	2				<2	<2	<2	<2	<2
	Demeton-S	µg/l	20				<20	<20	<20	<20	<20
	Dibenz(a.j)acridine	mg/l	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	Dibenzofuran	µg/l	2				<2	<2	<2	<2	<2
	Diphenylamine	µg/l	2				<2	<2	<2	<2	<2
	EPN	µg/l	2				<2	<2	<2	<2	<2
	Fensulfothion	µg/l	2				<2	<2	<2	<2	<2
	Hexachlorobutadiene	µg/l	2				<2	<2	<2	<2	<2
	Hexachlorocyclopentadiene	µg/l	4				<4	<4	<4	<4	<4
	Hexachloroethane	µg/l	2				<2	<2	<2	<2	<2
	Nitrobenzene	µg/l	5				<5	<5	<5	<5	<5
	N-nitrosodi-n-butylamine	µg/l	2				<2	<2	<2	<2	<2
	N-nitrosodi-n-propylamine	µg/l	0.002				<2	<2	<2	<2	<2
	N-nitrosopiperidine	µg/l	2				<2	<2	<2	<2	<2
	Pentachlorobenzene	µg/l	2				<2	<2	<2	<2	<2
	Pentachloronitrobenzene	µg/l	2				<2	<2	<2	<2	<2
	Pronamide	µg/l	5				<5	<5	<5	<5	<5
	Tetrachlorophenols - Total	mg/kg	0.03				<0.03	<0.03	<0.03	<0.03	<0.03
	Total Halogenated Phenol*	mg/kg	0.01				<0.01	<0.01	<0.01	<0.01	<0.01
	Total Non-Halogenated Phenol*	mg/kg	0.1				<0.1	<0.1	<0.1	<0.1	<0.1
TPH	TRH C15-C28	mg/kg	0.1	<0.1	<0.1	<0.1	**0.3**	<0.1	<0.1	<0.1	<0.1
	TRH C29-C36	mg/kg	0.1	<0.1	<0.1	<0.1	**0.5**	<0.1	<0.1	<0.1	<0.1
	TRH C10-C14	mg/kg	0.05	**0.2**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	TRH C10-C36 (Total)	mg/kg	0.1	**0.2**	<0.1	<0.1	**0.8**	<0.1	<0.1	<0.1	<0.1
TRH - Semivolatile Fraction	>C10 - C16 Fraction	mg/kg	0.05	**0.12**	<0.05	<0.05				<0.05	<0.05
	>C16 - C34 Fraction	mg/kg	0.1	<0.1	<0.1	<0.1				<0.1	<0.1
	>C34 - C40 Fraction	mg/kg	0.1	<0.1	<0.1	<0.1				<0.1	<0.1
VOC	1,2,4-trimethylbenzene	µg/l	1				<1	<1	<1	<1	<1
	1,3,5-trimethylbenzene	µg/l	1				<1	<1	<1	<1	<1
	4-chlorotoluene	µg/l	1				<1	<1	<1	<1	<1
	Bromobenzene	µg/l	1				<1	<1	<1	<1	<1
	Isopropylbenzene	µg/l	1				<1	<1	<1	<1	<1
	Styrene	µg/l	1				<1	<1	<1	<1	<1
	1,1,1,2-tetrachloroethane	µg/l	1				<1	<1	<1	<1	<1
	1,1,1-trichloroethane	µg/l	0.001				<1	<1	<1	<1	<1
	1,1,2,2-tetrachloroethane	µg/l	1				<1	<1	<1	<1	<1
	1,1,2-trichloroethane	µg/l	1				<1	<1	<1	<1	<1
	1,1-dichloroethane	µg/l	1				<1	<1	<1	<1	<1
	1,1-dichloroethene	µg/l	0.001				<1	<1	<1	<1	<1
	1,2,3-trichloropropane	µg/l	1				<1	<1	<1	<1	<1
	1,2-dibromoethane	µg/l	1				<1	<1	<1	<1	<1
	1,2-dichloroethane	µg/l	0.001				<1	<1	<1	<1	<1
	1,2-dichloropropane	µg/l	1				<1	<1	<1	<1	<1
	1,3-dichloropropane	µg/l	1				<1	<1	<1	<1	<1
	2-butanone (MEK)	µg/l	1				<1	<1	<1	<1	<1
	4-methyl-2-pentanone (MIBK)	µg/l	1				<1	<1	<1	<1	<1
	Acetone	mg/l	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Allyl chloride	mg/l	0.001				<0.001	<0.001	<0.001	<0.001	<0.001
	Bromochloromethane	µg/l	1				<1	<1	<1	<1	<1
	Bromodichloromethane	µg/l	1				<1	<1	<1	<1	<1
	Bromoform	µg/l	1				<1	<1	<1	<1	<1
	Bromomethane	µg/l	1				<1	<1	<1	<1	<1
	Carbon disulfide	µg/l	1				<1	<1	<1	<1	<1
	Carbon tetrachloride	µg/l	1				<1	<1	<1	<1	<1
	Chlorodibromomethane	µg/l	1				<1	<1	<1	<1	<1
	Chloroethane	µg/l	1				<1	<1	<1	<1	<1
	Chloroform	µg/l	5				<5	<5	<5	<5	<5
	Chloromethane	µg/l	1				<1	<1	<1	<1	<1
	cis-1,2-dichloroethene	µg/l	1				<1	<1	<1	<1	<1
	cis-1,3-dichloropropene	µg/l	1				<1	<1	<1	<1	<1
	Dibromomethane	µg/l	1				<1	<1	<1	<1	<1
	Dichlorodifluoromethane	µg/l	1				<1	<1	<1	<1	<1
	Dichloromethane	µg/l	1				<1	<1	<1	<1	<1
	Iodomethane	µg/l	1				<1	<1	<1	<1	<1
	TCE	µg/l	0.001				<1	<1	<1	<1	<1
	Tetrachloroethene	µg/l	1				<1	<1	<1	<1	<1
	Total MAH*	mg/kg	0.003				<0.003	<0.003	<0.003	<0.003	<0.003
	trans-1,2-dichloroethene	µg/l	1				<1	<1	<1	<1	<1
	trans-1,3-dichloropropene	µg/l	1				<1	<1	<1	<1	<1
	Trichlorofluoromethane	µg/l	1				<1	<1	<1	<1	<1
	Vic EPA IWRG 621 CHC (Total)*	mg/kg	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	Vic EPA IWRG 621 Other CHC (Total)*	mg/kg	0.005				<0.005	<0.005	<0.005	<0.005	<0.005
	Vinyl chloride	µg/l	1				<1	<1	<1	<1	<1
Volatile	m&p-Xylenes	mg/kg	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
	o-Xylene	mg/kg	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Contents

Trip Spike Recoveries (30% - 150% is acceptable)

SDG	Lab_Report_Number	Matrix_Type	SampleCode	Field_ID	Method_Name	Compound	Trip_Spike_Result	Trip_Spike_Control	Result_Units	Spike_Recovery_%	Acceptable	Result_Type	Lab_Comments
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	100	Y	REG	
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	95	Y	REG	
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	98	Y	REG	
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	88	Y	REG	
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	100	Y	REG	
05 Nov 2020	755061	WATER	S20-No09039	QC401_20201104 (TS)	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	91	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	120	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	92	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	100	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	97	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	100	Y	REG	
05 Nov 2020	755093	WATER	S20-No09379	QC401_20201103	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	98	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	90	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	90	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	93	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	Naphthalene	NA	NA	NA	85	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	95	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	88	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	TRH C6-C10	NA	NA	NA	110	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	TRH C6-C9	NA	NA	NA	90	Y	REG	
08 Oct 2020	749235	SOIL	S20-Oc14331	TS	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	94	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	110	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	110	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	110	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	100	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	110	Y	REG	
16 Nov 2020	757204	WATER	S20-No27422	QC401_20201112 (TRIP S	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	100	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	Benzene	NA	NA	NA	97	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	Ethylbenzene	NA	NA	NA	91	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	m&p-Xylenes	NA	NA	NA	96	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	o-Xylene	NA	NA	NA	87	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	Toluene	NA	NA	NA	93	Y	REG	
16 Nov 2020	757234	WATER	S20-No27819	QC401_2020111 (TS)	LTM-ORG-2010 TRH C6-C40	Xylenes - Total	NA	NA	NA	90	Y	REG	

APPENDIX E CALIBRATION CERTIFICATES

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Arup Ramsay Wharf	**Project Staff :**	T. Cook.
Project No :	0564417	**Date :**	29.9.20

Photo-ionisation Detector

Make/Model No:	Photech Tiger
Serial Number:	T-108868

Calibration Gas

Calibration Gas:	Isobutylene.

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	100.8

Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By: Tenille Cook.

Signature:		T. Cook.		Date:	

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name : Kamag Wharf **Project Staff :** T. Cook

Project No : 0564419 **Date :** 30.9.20

Photo-ionisation Detector

Make/Model No: Photocle-Tiger

Serial Number: T-108862

Calibration Gas

Calibration Gas: 150 butylene

PID Calibration

Zero Calibration

PID Reading: 0.0

Span Calibration

Desired PID Reading: 100

Actual PID Reading: 101.1

Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By: Tenille Cook

Signature:	T. Cook	Date:	30.9.20

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Kamay Wharf	**Project Staff :**	T. Cook.
Project No :	0564417	**Date :**	1·10·20

Photo-ionisation Detector

Make/Model No:	Photocheck Tiger
Serial Number:	T-108868

Calibration Gas

Calibration Gas:	Isobutylene.

PID Calibration

Zero Calibration

PID Reading:	0·0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	99·9.

Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By: Tenille Cook.

Signature:		T. Cook	Date:	1·10·20

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Kamay Wharfs	**Project Staff :**	T. Codd.
Project No :	0564417	**Date :**	8.10.20

Photo-ionisation Detector

Make/Model No:	PhoCheck Plus
Serial Number:	T-108868

Calibration Gas

Calibration Gas:	Isobutylene.

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	100.9

Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:	Tenille Codd.

Signature:		T. Codd	Date:	8.10.20

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	0564417	**Project Staff :**	Tenille Cotter
Project No :	Ramsay Works	**Date :**	13.10.20

Photo-ionisation Detector

Make/Model No:	Photocheck Tiger
Serial Number:	T-108868

Calibration Gas

Calibration Gas:	iso-butylene

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	100.9

Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:	

Signature:			Date:		

PID Calibration Certificate

Instrument **PhoCheck Tiger**
Serial No. **T-105435**

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm	N/A	N/A
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

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

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		92 PPM	NATA	SY245		90.2 PPM

Calibrated by: **Lauren Tompkins**

Calibration date: **02/11/2020**

Next calibration due: **02/12/2020**

PID Calibration Form

Job Details

ERM Job Number: 0564417

Site: La Perouse, Kamay Wharf

Instrument

Instrument: PID - Tiger

Serial Number: T- 105435

ERM Reference Number:

Gas

Manufacturer: Industrial Scientific

Lot Number: 1263631

Cylinder Number: 31

Expiry Date: Feb 2025

Gas Composition:

Component	Concentration
Isobutylene	100ppm

Maintenance

Refer to instruction manual for maintenance requirements

Item	Test	Pass	Comments
Battery	Fully Charged	✓	
Keypad	Operation	✓	
Display	Operation	✓	
Body	Clean	✓	
Alarms	Beeper	✓	
	Settings	✓	
Other		✓	

Calibration

Refer to instruction manual for calibration procedure

Component	Concentration	Concentration Recorded	Pass
Fresh Air	0.00ppm		✓
Isobutylene	100ppm		✓

Comments:

Calibrated by: TR

Signed:

Calibration Date: 11/11/20

PID Calibration Form

Job Details

ERM Job Number: 0564417

Site: Ramsay Wharf, La Perouse

Instrument

Instrument: PID- Tiger

Serial Number: T-105435

ERM Reference Number:

Gas

Manufacturer: Industrial Scientific

Lot Number: 1263631

Cylinder Number: 31

Expiry Date: Feb 2025

Gas Composition:

Component	Concentration
Isobutylene	100ppm

Maintenance

Refer to instruction manual for maintenance requirements

Item	Test	Pass	Comments
Battery	Fully Charged	✓	
Keypad	Operation	✓	
Display	Operation	✓	
Body	Clean	✓	
Alarms	Beeper	✓	
	Settings	✓	
Other			

Calibration

Refer to instruction manual for calibration procedure

Component	Concentration	Concentration Recorded	Pass
Fresh Air	0.00ppm		✓
Isobutylene	100ppm		✓

Comments:

Calibrated by: TR

Signed:

Calibration Date: 12/11/20

APPENDIX F ARUP INVESTIGATION METHODOLOGY

APPENDIX G LABORATORY CERTIFICATES

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ERM	Project №	0564417	Project Manager	Ian Batterley.
Address	1/45 Watt St Newcastle.	Project Name	Kamay Wharfs.	EDD Format (ESdat, EQuIS etc)	
Contact Name	Tenille Cook			Sampler(s)	Tenille Cook.
Phone №	0432482760			Handed over by	
Special Directions				Email for Invoice	
Purchase Order				Email for Results	
Quote ID №					

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	HOLD
21	RO1_200929	29.9.20		X
22	RO1_200930	29.9.20		X
23	TS			X
24	TB.			X
25	KU-BH03_4.15	30.9.20		X
26	KU-BH03_385	29.9.20		X
27				
28				
29				
30				
	Total Counts			

Containers — Change container type & size if necessary.

500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

♦Surcharge will apply

- ☐ Overnight (reporting by 9am)♦
- ☐ Same day♦ ☐ 1 day♦
- ☐ 2 days♦ ☐ 3 days♦
- ☐ 5 days (Standard)
- ☐ Other( )

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment: ☐ Courier (#) ☑ Hand Delivered ☐ Postal — Name — Signature — Date — Time

Laboratory Use Only											
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	2/10	Time	1230	Temperature	11.7.
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	749235

#AU04_Enviro_Sample_NSW

From: Tenille Cook <Tenille.Cook@erm.com>
Sent: Thursday, 8 October 2020 9:01 AM
To: #AU04_Enviro_Sample_NSW
Cc: Ian Batterley
Subject: RE: SRN for Samples Delivered Friday 2/10/2020

Follow Up Flag: Follow up
Flag Status: Flagged

Great, thanks

Could I please request the following

Samples – KU_BH03_3.85 and KU_BH03_4.14

- TBT
- PFAS
- TRH/BTEXN/PAH
- SVOCs/VOCs
- Heavy metals
- Triazine and Atrazine
- OCPs/OPPs

For TB/TS
- TRH/BTEXN

All samples starting with R0

- TRH/BTEXN/PFAS/heavy metals

Thanks
Tenille

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Thursday, October 8, 2020 8:35 AM
To: Tenille Cook <Tenille.Cook@erm.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: SRN for Samples Delivered Friday 2/10/2020

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Tenille,

We have received samples for job 564294 here waiting for analysis.

Kind Regards,

Ryan Phillips
Enviro Sample NSW
Sample Receipt NSW

749235.

To: Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: SRN for Samples Delivered Friday 2/10/2020

EXTERNAL EMAIL*

Yes I dropped them at the newy lab and wrote up a COC while there and handed that over as well

From: Andrew Black <AndrewBlack@eurofins.com>
Sent: Tuesday, October 6, 2020 2:45 PM
To: Tenille Cook <Tenille.Cook@erm.com>
Subject: RE: SRN for Samples Delivered Friday 2/10/2020

Hi Tenille

Have you got some more details? Was this at Newcastle? Was a COC provided for these etc?

Andrew Black
Phone: +61 410 220 750
Email: AndrewBlack@eurofins.com

From: Tenille Cook <Tenille.Cook@erm.com>
Sent: Tuesday, 6 October 2020 2:42 PM
To: Andrew Black <AndrewBlack@eurofins.com>
Cc: Ian Batterley <Ian.Batterley@erm.com>
Subject: SRN for Samples Delivered Friday 2/10/2020

EXTERNAL EMAIL*

Hi Andrew,

I am just chasing an SRN for some samples that I delivered to the lab on Friday – project number 0564417

I dropped them off to a lady who I didn't get the name of around midday

Thanks

Tenille Cook
Environmental Scientist

ERM
Level 1 | Watt Street Commercial Centre | 45 Watt Street Newcastle NSW 2300
PO Box 803, Newcastle NSW 2300 |
T +61 2 49035529
M 0432 482 760
E Tenille.cook@erm.com | **W** www.erm.com

ERM *The business of sustainability*

REPORT OF ANALYSIS

Report No. RN1291210

Client	: EUROFINS MGT	**Job No.**	: EURO26/201009
	6 Monterey Road	**Quote No.**	: QT-02018
	Dandenong South VIC 3175	**Order No.**	: 20-434-1028-749235
		Date Received	: 9-OCT-2020
Attention	: ANDREW BLACK	**Sampled By**	: CLIENT
Project Name	:		
Your Client Services Manager	: Tim Reddan	**Phone**	: 03 9644 4854

Lab Reg No.	Sample Ref	Sample Description
N20/023766	.	SOIL S20-OC14323 KU_BH03_3.85 REF: 749235
N20/023767	.	SOIL S20-OC14324 KU_BH03_4.15 REF: 749235

Lab Reg No.		N20/023766	N20/023767			
Date Sampled		29-SEP-2020	29-SEP-2020			
Sample Reference	Units	.	.			Method
Organotins						
Monobutyltin as Sn	ng/g	0.85	0.75			NR_35
Dibutyltin as Sn	ng/g	<0.5	<0.5			NR_35
Tributyltin as Sn	ng/g	<0.5	<0.5			NR_35
Surrogate: Tripropyltin	%REC	98	90			NR_35
Dates						
Date extracted		16-OCT-2020	16-OCT-2020			
Date analysed		16-OCT-2020	16-OCT-2020			

Luke Baker, Analyst
Organics - NSW
Accreditation No. 198

20-OCT-2020

Lab Reg No.		N20/023766	N20/023767			
Date Sampled		29-SEP-2020	29-SEP-2020			
Sample Reference	Units	.	.			Method
Trace Elements						
Total Solids	%	86.7	86.4			NT2_49
Dates						
Date extracted		9-OCT-2020	9-OCT-2020			
Date analysed		12-OCT-2020	12-OCT-2020			

REPORT OF ANALYSIS

Lab Reg No.		N20/023766	N20/023767			
Date Sampled		29-SEP-2020	29-SEP-2020			
Sample Reference	Units	.	.			Method

Pankaj Barai, Analyst
Inorganics - NSW
Accreditation No. 198

20-OCT-2020

All results are expressed on a dry weight basis.

ACCREDITED FOR TECHNICAL COMPETENCE

Accredited for compliance with ISO/IEC 17025 - Testing.
This report shall not be reproduced except in full.
Results relate only to the sample(s) as received and tested.

This Report supersedes reports: *RN1291204*

Measurement Uncertainty is available upon request.
Chemical Accreditation 198: 105 Delhi Road, North Ryde, NSW, 2113

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

Australia

Melbourne
6 Monterey Road
Dandenong South VIC 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Newcastle
4/52 Industrial Drive
Mayfield East NSW 2304
PO Box 60 Wickham 2293
Phone : +61 2 4968 8448

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARFS
Project ID: 0564417

Order No.:
Report #: 749235
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 9:01 AM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Tenille Cook

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Tributyltin (TBT)	Triazines	Metals M8	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271							X		X	X	X	X	X	X		
Sydney Laboratory - NATA Site # 18217								X			X	X	X			X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory						X										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	KU_BH03_3.85	Sep 29, 2020		Soil	S20-Oc14323	X	X		X	X	X			X	X	
2	KU_BH03_4.15	Sep 30, 2020		Soil	S20-Oc14324	X	X		X	X	X			X	X	
3	R01_200929	Sep 29, 2020		Water	S20-Oc14325			X				X			X	
4	R01_200930	Sep 30, 2020		Water	S20-Oc14327			X				X			X	
5	TB	Sep 29, 2020		Soil	S20-Oc14330								X			
6	TS	Sep 29, 2020		Soil	S20-Oc14331											X
7	TS LAB	Sep 29, 2020		Soil	S20-Oc14332											X
Test Counts						2	2	2	2	2	2	2	1	2	4	2

ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Tenille Cook**

Report **749235-S**
Project name KAMAY WHARFS
Project ID 0564417
Received Date Oct 08, 2020

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
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	%	61	65	120	-
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	-	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	-	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	-	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	-	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Bromofluorobenzene (surr.)	1	%	61	65	-	-
Toluene-d8 (surr.)	1	%	60	64	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	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	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
Naphthalene	1	%	-	-	-	85
TRH C6-C9	1	%	-	-	-	90
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
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	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
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	%	128	98	-	-
p-Terphenyl-d14 (surr.)	1	%	115	85	-	-
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-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
b-BHC	0.05	mg/kg	< 0.05	< 0.05	-	-
d-BHC	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-BHC (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	0.1	mg/kg	< 0.1	< 0.1	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	115	114	-	-
Tetrachloro-m-xylene (surr.)	1	%	89	94	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
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	%	100	94	-	-
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	-	-
Atraton	0.2	mg/kg	< 0.2	< 0.2	-	-
Atrazine	0.2	mg/kg	< 0.2	< 0.2	-	-
Prometon	0.2	mg/kg	< 0.2	< 0.2	-	-
Prometryn	0.2	mg/kg	< 0.2	< 0.2	-	-
Propazine	0.2	mg/kg	< 0.2	< 0.2	-	-
Simazine	0.2	mg/kg	< 0.2	< 0.2	-	-
Simetryn	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
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	-	-
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Nitrophenol	1.0	mg/kg	< 1	< 1	-	-
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	-	-
2.3.4.6-Tetrachlorophenol	5	mg/kg	< 5	< 5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	-	-
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	-	-
4.4'-DDT	0.5	mg/kg	< 0.5	< 0.5	-	-
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
a-BHC	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Aniline	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
b-BHC	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	-	-
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	-	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	-	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	-	-
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
d-BHC	0.5	mg/kg	< 0.5	< 0.5	-	-
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	-	-
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	-	-
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	-	-
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	-	-
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	-	-
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	-	-
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	-	-
Endrin	0.5	mg/kg	< 0.5	< 0.5	-	-
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	-	-
Endrin ketone	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	-	-
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	-	-
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	-	-
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	-	-
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	-	-
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	-	-
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	-	-
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	-	-
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	-	-
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Pronamide	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol-d6 (surr.)	1	%	99	67	-	-
Nitrobenzene-d5 (surr.)	1	%	118	91	-	-
2-Fluorobiphenyl (surr.)	1	%	128	98	-	-
2.4.6-Tribromophenol (surr.)	1	%	93	71	-	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	7.7	-	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	-	-
Chromium	5	mg/kg	5.4	63	-	-
Copper	5	mg/kg	< 5	36	-	-
Lead	5	mg/kg	< 5	14	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-
Nickel	5	mg/kg	< 5	21	-	-
Zinc	5	mg/kg	< 5	59	-	-
Tributyltin (TBT)			see attached	see attached	-	-
% Moisture	1	%	12	17	-	-
TRH C6-C10	1	%	-	-	-	110
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	-	-
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	%	80	82	-	-
13C5-PFPeA (surr.)	1	%	107	101	-	-
13C5-PFHxA (surr.)	1	%	82	91	-	-
13C4-PFHpA (surr.)	1	%	94	92	-	-
13C8-PFOA (surr.)	1	%	98	101	-	-
13C5-PFNA (surr.)	1	%	103	111	-	-
13C6-PFDA (surr.)	1	%	135	129	-	-
13C2-PFUnDA (surr.)	1	%	139	143	-	-
13C2-PFDoDA (surr.)	1	%	128	99	-	-
13C2-PFTeDA (surr.)	1	%	102	91	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
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	%	104	105	-	-
D3-N-MeFOSA (surr.)	1	%	116	110	-	-
D5-N-EtFOSA (surr.)	1	%	102	108	-	-
D7-N-MeFOSE (surr.)	1	%	108	101	-	-
D9-N-EtFOSE (surr.)	1	%	93	98	-	-
D5-N-EtFOSAA (surr.)	1	%	78	82	-	-
D3-N-MeFOSAA (surr.)	1	%	85	84	-	-
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	%	95	99	-	-
18O2-PFHxS (surr.)	1	%	102	99	-	-
13C8-PFOS (surr.)	1	%	108	108	-	-
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	%	35	37	-	-
13C2-6:2 FTSA (surr.)	1	%	54	32	-	-
13C2-8:2 FTSA (surr.)	1	%	72	73	-	-
13C2-10:2 FTSA (surr.)	1	%	87	83	-	-
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	-	-

Client Sample ID			KU_BH03_3.85	KU_BH03_4.15	TB	TS
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-Oc14323	S20-Oc14324	S20-Oc14330	S20-Oc14331
Date Sampled			Sep 29, 2020	Sep 30, 2020	Sep 29, 2020	Sep 29, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	1	%	-	-	-	90
Ethylbenzene	1	%	-	-	-	90
m&p-Xylenes	1	%	-	-	-	93
o-Xylene	1	%	-	-	-	95
Toluene	1	%	-	-	-	88
Xylenes - Total	1	%	-	-	-	94
4-Bromofluorobenzene (surr.)	1	%	-	-	-	96

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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
BTEX	Sydney	Oct 14, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Oct 14, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Oct 12, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Semivolatile Organics	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Eurofins Suite B1			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Oct 14, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B7			
Polycyclic Aromatic Hydrocarbons	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Melbourne	Oct 12, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Suite B14: OCP/OPP			
Organochlorine Pesticides	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Triazines	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
% Moisture	Melbourne	Oct 08, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Oct 08, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Oct 08, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Oct 09, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Oct 09, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Company Name:	ERM Hunter Valley	**Order No.:**	**Received:** Oct 8, 2020 9:01 AM
Address:	Level 1 / 45 Watt Street Newcastle NSW 2300	**Report #:** 749235 **Phone:** (02) 4964 2150 **Fax:** (02) 4964 2152	**Due:** Oct 15, 2020 **Priority:** 5 Day **Contact Name:** Tenille Cook
Project Name:	KAMAY WHARFS		
Project ID:	0564417		

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Tributyltin (TBT)	Triazines	Metals M8	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271							X		X	X	X	X	X	X		
Sydney Laboratory - NATA Site # 18217								X			X	X	X			X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory						X										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	KU_BH03_3.85	Sep 29, 2020		Soil	S20-Oc14323	X	X		X	X	X			X	X	
2	KU_BH03_4.15	Sep 30, 2020		Soil	S20-Oc14324	X	X		X	X	X			X	X	
3	R01_200929	Sep 29, 2020		Water	S20-Oc14325			X				X			X	
4	R01_200930	Sep 30, 2020		Water	S20-Oc14327			X				X			X	
5	TB	Sep 29, 2020		Soil	S20-Oc14330								X			
6	TS	Sep 29, 2020		Soil	S20-Oc14331											X
7	TS LAB	Sep 29, 2020		Soil	S20-Oc14332											X
Test Counts						2	2	2	2	2	2	2	1	2	4	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Triazines							
Ametryn	mg/kg	< 0.2			0.2	Pass	
Atraton	mg/kg	< 0.2			0.2	Pass	
Atrazine	mg/kg	< 0.2			0.2	Pass	
Prometon	mg/kg	< 0.2			0.2	Pass	
Prometryn	mg/kg	< 0.2			0.2	Pass	
Propazine	mg/kg	< 0.2			0.2	Pass	
Simazine	mg/kg	< 0.2			0.2	Pass	
Simetryn	mg/kg	< 0.2			0.2	Pass	
Terbuthylazine	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Terbutryne	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 5			5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			0.5	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
BTEX							
Benzene	%	114			70-130	Pass	
Toluene	%	119			70-130	Pass	
Ethylbenzene	%	121			70-130	Pass	
m&p-Xylenes	%	123			70-130	Pass	
Xylenes - Total*	%	123			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	78			70-130	Pass	
1.1.1-Trichloroethane	%	90			70-130	Pass	
1.2-Dichlorobenzene	%	105			70-130	Pass	
1.2-Dichloroethane	%	112			70-130	Pass	
Trichloroethene	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	101			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH >C10-C16	%	122			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	83			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	130			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	107			70-130	Pass	
Acenaphthylene	%	97			70-130	Pass	
Anthracene	%	122			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	112			70-130	Pass	
Benzo(b&j)fluoranthene	%	111			70-130	Pass	
Benzo(g.h.i)perylene	%	114			70-130	Pass	
Benzo(k)fluoranthene	%	126			70-130	Pass	
Chrysene	%	93			70-130	Pass	
Dibenz(a.h)anthracene	%	116			70-130	Pass	
Fluoranthene	%	119			70-130	Pass	
Fluorene	%	105			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	108			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
Phenanthrene	%	118			70-130	Pass	
Pyrene	%	128			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	103			70-130	Pass	
4.4'-DDD	%	120			70-130	Pass	
4.4'-DDE	%	117			70-130	Pass	
4.4'-DDT	%	106			70-130	Pass	
a-BHC	%	101			70-130	Pass	
Aldrin	%	121			70-130	Pass	
b-BHC	%	105			70-130	Pass	
d-BHC	%	100			70-130	Pass	
Dieldrin	%	90			70-130	Pass	
Endosulfan I	%	102			70-130	Pass	
Endosulfan II	%	94			70-130	Pass	
Endosulfan sulphate	%	125			70-130	Pass	
Endrin	%	97			70-130	Pass	
Endrin aldehyde	%	95			70-130	Pass	
Endrin ketone	%	119			70-130	Pass	
g-BHC (Lindane)	%	121			70-130	Pass	
Heptachlor	%	96			70-130	Pass	
Heptachlor epoxide	%	102			70-130	Pass	
Hexachlorobenzene	%	119			70-130	Pass	
Methoxychlor	%	79			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	105			70-130	Pass	
Dimethoate	%	106			70-130	Pass	
Ethion	%	114			70-130	Pass	
Fenitrothion	%	111			70-130	Pass	
Methyl parathion	%	101			70-130	Pass	
Mevinphos	%	108			70-130	Pass	
LCS - % Recovery							
Triazines							
Prometryn	%	130			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	%	100			30-130	Pass	
2-Chlorophenol	%	111			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methylphenol (o-Cresol)	%	97			30-130	Pass	
2-Nitrophenol	%	90			30-130	Pass	
2.4-Dichlorophenol	%	88			30-130	Pass	
2.4-Dimethylphenol	%	111			30-130	Pass	
2.4-Dinitrophenol	%	121			30-130	Pass	
2.4.5-Trichlorophenol	%	90			30-130	Pass	
2.4.6-Trichlorophenol	%	99			30-130	Pass	
2.6-Dichlorophenol	%	83			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	92			30-130	Pass	
4-Chloro-3-methylphenol	%	97			30-130	Pass	
4-Nitrophenol	%	115			30-130	Pass	
Pentachlorophenol	%	130			30-130	Pass	
Phenol	%	113			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	111			80-120	Pass	
Copper	%	103			80-120	Pass	
Lead	%	109			80-120	Pass	
Mercury	%	104			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	102			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	92			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	88			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	93			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	86			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	110			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	114			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	104			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	83			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	103			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	97			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	88			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	76			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	87			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	97			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	118			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	89			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	74			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	104			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	93			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	90			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanesulfonic acid (PFDS)			%	104			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	89			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	98			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	105			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	107			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	B20-Oc10452	NCP	%	74			70-130	Pass	
1.1.1-Trichloroethane	B20-Oc10452	NCP	%	78			70-130	Pass	
1.2-Dichlorobenzene	B20-Oc10452	NCP	%	103			70-130	Pass	
1.2-Dichloroethane	B20-Oc10452	NCP	%	97			70-130	Pass	
Trichloroethene	B20-Oc10452	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Oc17274	NCP	%	121			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Oc17274	NCP	%	118			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M20-Oc11471	NCP	%	86			70-130	Pass	
Acenaphthylene	M20-Oc11471	NCP	%	81			70-130	Pass	
Anthracene	M20-Oc11471	NCP	%	86			70-130	Pass	
Benz(a)anthracene	M20-Oc11471	NCP	%	87			70-130	Pass	
Benzo(a)pyrene	M20-Oc11471	NCP	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	M20-Oc11471	NCP	%	88			70-130	Pass	
Benzo(g.h.i)perylene	M20-Oc11471	NCP	%	80			70-130	Pass	
Benzo(k)fluoranthene	M20-Oc11471	NCP	%	96			70-130	Pass	
Chrysene	M20-Oc11471	NCP	%	83			70-130	Pass	
Dibenz(a.h)anthracene	M20-Oc11471	NCP	%	91			70-130	Pass	
Fluoranthene	M20-Oc11471	NCP	%	103			70-130	Pass	
Fluorene	M20-Oc11471	NCP	%	87			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M20-Oc11471	NCP	%	89			70-130	Pass	
Naphthalene	M20-Oc11471	NCP	%	78			70-130	Pass	
Phenanthrene	M20-Oc11471	NCP	%	93			70-130	Pass	
Pyrene	M20-Oc11471	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Oc18747	NCP	%	94			75-125	Pass	
Cadmium	M20-Oc18747	NCP	%	105			75-125	Pass	
Chromium	M20-Oc18747	NCP	%	107			75-125	Pass	
Copper	M20-Oc18747	NCP	%	101			75-125	Pass	
Lead	M20-Oc18747	NCP	%	109			75-125	Pass	
Mercury	M20-Oc18747	NCP	%	109			75-125	Pass	
Nickel	M20-Oc18747	NCP	%	100			75-125	Pass	
Zinc	M20-Oc18747	NCP	%	99			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B20-Oc10475	NCP	%	79			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B20-Oc10475	NCP	%	82			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B20-Oc10475	NCP	%	79			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanoic acid (PFHpA)	B20-Oc10475	NCP	%	73			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B20-Oc10475	NCP	%	69			50-150	Pass	
Perfluorononanoic acid (PFNA)	B20-Oc10475	NCP	%	72			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B20-Oc10475	NCP	%	66			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B20-Oc10475	NCP	%	77			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B20-Oc10475	NCP	%	90			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B20-Oc10475	NCP	%	90			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B20-Oc10475	NCP	%	82			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B20-Oc10475	NCP	%	69			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B20-Oc10475	NCP	%	88			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B20-Oc10475	NCP	%	75			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B20-Oc10475	NCP	%	62			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B20-Oc10475	NCP	%	79			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B20-Oc10475	NCP	%	84			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B20-Oc10475	NCP	%	78			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B20-Oc10475	NCP	%	66			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B20-Oc10475	NCP	%	89			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B20-Oc10475	NCP	%	76			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B20-Oc10475	NCP	%	61			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B20-Oc10475	NCP	%	75			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B20-Oc10475	NCP	%	76			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	B20-Oc10475	NCP	%	73			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B20-Oc10475	NCP	%	85			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B20-Oc10475	NCP	%	83			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	B20-Oc10475	NCP	%	80			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B20-Oc10475	NCP	%	77			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B20-Oc10475	NCP	%	85			50-150	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Oc23385	NCP	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Toluene	S20-Oc23385	NCP	%	97			70-130	Pass	
Ethylbenzene	S20-Oc23385	NCP	%	101			70-130	Pass	
m&p-Xylenes	S20-Oc23385	NCP	%	103			70-130	Pass	
o-Xylene	S20-Oc23385	NCP	%	102			70-130	Pass	
Xylenes - Total*	S20-Oc23385	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Oc23385	NCP	%	115			70-130	Pass	
TRH C6-C10	S20-Oc23385	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S20-Oc23385	NCP	%	107			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Methylene Chloride	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M20-Oc19303	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Oc18070	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Oc18070	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Oc18070	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B20-Oc10452	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin ketone	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B20-Oc10452	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	B20-Oc10452	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B20-Oc10452	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B20-Oc10452	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	B20-Oc10452	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B20-Oc10452	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	B20-Oc10452	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	B20-Oc10452	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dichlorophenol	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	B20-Oc10452	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	B20-Oc10452	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	B20-Oc10452	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B20-Oc10452	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	B20-Oc10452	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	B20-Oc10452	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4.4'-DDD	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dibenz(a.j)acridine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	B20-Oc10452	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Oc18831	NCP	mg/kg	3.6	4.0	11	30%	Pass	
Cadmium	M20-Oc18831	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Oc18831	NCP	mg/kg	29	32	9.0	30%	Pass	
Copper	M20-Oc18831	NCP	mg/kg	20	21	7.0	30%	Pass	
Lead	M20-Oc18831	NCP	mg/kg	28	28	<1	30%	Pass	
Mercury	M20-Oc18831	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Oc18831	NCP	mg/kg	26	29	12	30%	Pass	
Zinc	M20-Oc18831	NCP	mg/kg	83	91	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	B20-Oc14020	NCP	%	3.5	3.5	1.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluoroundecanoic acid (PFUnDA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-Oc14323	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-Oc14323	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-Oc14323	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)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-Oc14323	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-Oc14323	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Oc23075	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-Oc23075	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-Oc23075	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-Oc23075	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	S20-Oc23075	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-Oc23075	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Oc23075	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-Oc23075	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S20-Oc23075	NCP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

TBT analysed by: NMI, accreditation number 198; report reference RN129204

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
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

Andrew Black	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Sarah McCallion	Senior Analyst-PFAS (QLD)
Vivian Wang	Senior Analyst-Volatile (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Tenille Cook**

Report **749235-W**
Project name KAMAY WHARFS
Project ID 0564417
Received Date Oct 08, 2020

Client Sample ID			**R01_200929**	**R01_200930**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**S20-Oc14325**	**S20-Oc14327**
Date Sampled			**Sep 29, 2020**	**Sep 30, 2020**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	0.20	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.2	< 0.1
BTEX				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	99	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	0.12	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.12	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.12	< 0.1
Heavy Metals				
Arsenic	0.001	mg/L	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001
Zinc	0.005	mg/L	< 0.005	< 0.005

Client Sample ID			R01_200929	R01_200930
Sample Matrix			Water	Water
Eurofins Sample No.			S20-Oc14325	S20-Oc14327
Date Sampled			Sep 29, 2020	Sep 30, 2020
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	61	61
13C5-PFPeA (surr.)	1	%	85	77
13C5-PFHxA (surr.)	1	%	93	87
13C4-PFHpA (surr.)	1	%	91	88
13C8-PFOA (surr.)	1	%	83	82
13C5-PFNA (surr.)	1	%	88	89
13C6-PFDA (surr.)	1	%	85	91
13C2-PFUnDA (surr.)	1	%	78	80
13C2-PFDoDA (surr.)	1	%	77	86
13C2-PFTeDA (surr.)	1	%	103	106
Perfluoroalkyl sulfonamido substances				
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	69	68
D3-N-MeFOSA (surr.)	1	%	105	97
D5-N-EtFOSA (surr.)	1	%	165	166
D7-N-MeFOSE (surr.)	1	%	74	73
D9-N-EtFOSE (surr.)	1	%	77	83
D5-N-EtFOSAA (surr.)	1	%	39	62
D3-N-MeFOSAA (surr.)	1	%	27	38
Perfluoroalkyl sulfonic acids (PFSAs)				
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	81	83

Client Sample ID			R01_200929	R01_200930
Sample Matrix			Water	Water
Eurofins Sample No.			S20-Oc14325	S20-Oc14327
Date Sampled			Sep 29, 2020	Sep 30, 2020
Test/Reference	LOR	Unit		
Perfluoroalkyl sulfonic acids (PFSAs)				
18O2-PFHxS (surr.)	1	%	83	80
13C8-PFOS (surr.)	1	%	81	81
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01
13C2-4:2 FTSA (surr.)	1	%	40	60
13C2-6:2 FTSA (surr.)	1	%	53	59
13C2-8:2 FTSA (surr.)	1	%	51	102
13C2-10:2 FTSA (surr.)	1	%	53	105
PFASs Summations				
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Oct 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Oct 08, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 08, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B1			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Oct 08, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B7			
Metals M8	Sydney	Oct 08, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Oct 13, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Oct 13, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Oct 13, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Oct 13, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Received: Oct 8, 2020 9:01 AM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Tenille Cook

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Tributyltin (TBT)	Triazines	Metals M8	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEXN and Volatile TRH
Melbourne Laboratory - NATA Site # 1254 & 14271							X		X	X	X	X	X	X		
Sydney Laboratory - NATA Site # 18217								X			X	X	X			X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory						X										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	KU_BH03_3.85	Sep 29, 2020		Soil	S20-Oc14323	X	X		X	X	X			X	X	
2	KU_BH03_4.15	Sep 30, 2020		Soil	S20-Oc14324	X	X		X	X	X			X	X	
3	R01_200929	Sep 29, 2020		Water	S20-Oc14325			X				X			X	
4	R01_200930	Sep 30, 2020		Water	S20-Oc14327			X				X			X	
5	TB	Sep 29, 2020		Soil	S20-Oc14330								X			
6	TS	Sep 29, 2020		Soil	S20-Oc14331											X
7	TS LAB	Sep 29, 2020		Soil	S20-Oc14332											X
Test Counts						2	2	2	2	2	2	2	1	2	4	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	96			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	95			70-130	Pass	
o-Xylene	%	95			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	70			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	97			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	101			80-120	Pass	
Mercury	%	107			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	100			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	85			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	103			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	89			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	99			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	96			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	%	71			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	92			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	75			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	93			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	101			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	109			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	68			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	110			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	84			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	118			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	111			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	96			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	102			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	81			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	79			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	80			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	82			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	S20-Oc16735	NCP	%	124			70-130	Pass	
TRH C10-C14	S20-Oc14081	NCP	%	91			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-Oc16735	NCP	%	104			70-130	Pass	
Toluene	S20-Oc16735	NCP	%	100			70-130	Pass	
Ethylbenzene	S20-Oc16735	NCP	%	100			70-130	Pass	
m&p-Xylenes	S20-Oc16735	NCP	%	100			70-130	Pass	
o-Xylene	S20-Oc16735	NCP	%	99			70-130	Pass	
Xylenes - Total*	S20-Oc16735	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-Oc16735	NCP	%	105			70-130	Pass	
TRH C6-C10	S20-Oc16735	NCP	%	126			70-130	Pass	
TRH >C10-C16	S20-Oc14081	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-Oc10291	NCP	%	104			75-125	Pass	
Cadmium	S20-Oc10291	NCP	%	100			75-125	Pass	
Chromium	S20-Oc10291	NCP	%	99			75-125	Pass	
Copper	S20-Oc10291	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Lead	S20-Oc10291	NCP	%	100			75-125	Pass	
Mercury	S20-Oc10291	NCP	%	94			75-125	Pass	
Nickel	S20-Oc10291	NCP	%	96			75-125	Pass	
Zinc	S20-Oc10291	NCP	%	94			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-Oc14327	CP	%	83			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-Oc14327	CP	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-Oc14327	CP	%	95			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-Oc14327	CP	%	89			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-Oc14327	CP	%	89			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-Oc14327	CP	%	92			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-Oc14327	CP	%	95			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-Oc14327	CP	%	66			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-Oc14327	CP	%	86			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-Oc14327	CP	%	65			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-Oc14327	CP	%	91			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-Oc14327	CP	%	99			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-Oc14327	CP	%	113			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-Oc14327	CP	%	63			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-Oc14327	CP	%	104			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-Oc14327	CP	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-Oc14327	CP	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-Oc14327	CP	%	98			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-Oc14327	CP	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-Oc14327	CP	%	88			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-Oc14327	CP	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-Oc14327	CP	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-Oc14327	CP	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-Oc14327	CP	%	110			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-Oc14327	CP	%	98			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-Oc14327	CP	%	82			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-Oc14327	CP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-Oc14327	CP	%	79			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-Oc14327	CP	%	79			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-Oc14327	CP	%	82			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	S20-Oc16734	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Oc16734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-Oc16734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-Oc16734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-Oc16734	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-Oc16734	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S20-Oc16734	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Oc16734	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S20-Oc16734	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-Oc09583	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-Oc09583	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-Oc09583	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-Oc09583	NCP	mg/L	0.011	0.011	3.0	30%	Pass	
Lead	S20-Oc09583	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-Oc09583	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-Oc09583	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S20-Oc09583	NCP	mg/L	0.007	0.007	9.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-Oc14327	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S20-Oc14327	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-Oc14327	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-Oc14327	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S20-Oc14327	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-Oc14327	CP	mg/L	< 0.1	< 0.1	<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
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).

Authorised By

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

☐ **Sydney Laboratory** Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1 21 Smallwood Place Murarrie QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2 91 Leach Highway Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 6 Monterey Road Dandenong South VIC 3175 03 8564 5000 EnviroSampleVic@eurofins.com

Company	ERM	**Project №**	0564417	**Project Manager**	Ian Batterley.
Address	1/45 Watt St. Newcastle.	**Project Name**	Kamay wharf	**EDD Format** ESdat, EQuIS etc	
Contact Name	Tenille Code			**Sampler(s)**	T. Code.
Phone №	0432482760			**Handed over by**	T. Code
Special Directions				**Email for Invoice**	PM + [redacted]
Purchase Order	Ø			**Email for Results**	PM + T. Code
Quote ID №					

Analyses Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers Change container type & size if necessary.

Required Turnaround Time (TAT) Default will be 5 days if not ticked.

♦Surcharge will apply

☐ Overnight (reporting by 9am)♦ ☐ Same day♦ ☐ 1 day♦ ☐ 2 days♦ ☐ 3 days♦ ☐ 5 days (Standard) ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	TBT	PFAS	TRH / BTEX	PAH	SVOCs / VOC	Heavy Metals	Triazine	atrazine	OCP / OPP	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
21	LP_BH02_2.5	8.10.20	S	X	→	→	→	→	→	→	→	→							X		
22	LP_BH02_4.0	↓	S																X		
23	LP_BH02_7.25	↓	S																X		
24	LP_BH02_8.2	8.10.20	S	X	→	→	→	→	→	→	→	→							X		
25	DOL201008	↓	S	X	→	→	→	→	→	→	→	→							X		
26	ROL_201008	↓	S		X	X			X						X	X	X	X			
27	TB	↓	S			X											X				
28	TS	↓	S			X											X				
29																					
30																					
	Total Counts																				

Method of Shipment ☐ Courier (#) ☐ Hand Delivered ☐ Postal Name Signature Date Time

Laboratory Use Only									
Received By	Andrew Black	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	8/10/20	Time	4-30pm	Temperature	
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	749763

Eurofins Environment Testing Australia Pty Ltd

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | Environment Testing Standard Terms and Conditions unless agreed otherwise. A copy is available on request.

Jake

#AU_CAU001_EnviroSampleVic

From: Tenille Cook <Tenille.Cook@erm.com>
Sent: Monday, 12 October 2020 3:44 PM
To: #AU_CAU001_EnviroSampleVic; Ian Batterley
Subject: RE: Eurofins Sample Receipt Advice - Report 749763 : Site KAMAY WHARF (1564417)

Hi,

Could I please amend the analysis for sample LP_BH02_8.2 to be scheduled for the below ONLY

- PFAS
- Chlorinated hydrocarbons
- Tributyltin
- TRH/BTEX
- SVOC/VOCs
- Heavy metals
- Nutrients/inorganics

Thanks
Tenille

From: EnviroSampleVic@eurofins.com <EnviroSampleVic@eurofins.com>
Sent: Monday, October 12, 2020 3:31 PM
To: Ian Batterley <Ian.Batterley@erm.com>
Cc: Tenille Cook <Tenille.Cook@erm.com>
Subject: Eurofins Sample Receipt Advice - Report 749763 : Site KAMAY WHARF (1564417)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Valued Client,

Please find attached a Sample Receipt Advice (SRA), a Summary Sheet and a scanned copy of your Chain-of-Custody (COC). It is important that you check this documentation to ensure that the details are correct such as the Client Job Number, Turn Around Time, any comments in the Notes section and sample numbers as well as the requested analysis. If there are any irregularities then please contact your Eurofins Analytical Services Manager as soon as possible to make certain that they get changed.

Regards

Jake Beaumont
Sample Receipt

Eurofins Environment Testing Australia P/L
6 Montery Road
Dandenong South 3175
AUSTRALIA
EnviroNote 1098 - Melbourne PFAS Accreditation

[EnviroNote 1103 - NATA Accreditation for Dioxins]

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IANZ # 1290

Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	LP_BH02_2.5	Oct 08, 2020		Soil	M20-Oc17942		X			X			X	X	X	X	X	X		X
2	LP_BH02_8.2	Oct 08, 2020		Soil	M20-Oc17943		X	X	X		X	X	X	X	X	X	X	X		X
3	D01_201008	Oct 08, 2020		Soil	M20-Oc17944		X	X	X		X	X	X	X	X	X	X	X		X
4	R01_201008	Oct 08, 2020		Water	M20-Oc17945								X	X				X		X
5	TB	Oct 08, 2020		Soil	M20-Oc17946														X	
6	TS	Oct 08, 2020		Soil	M20-Oc17947														X	
7	LP_BH02_4.0	Oct 08, 2020		Soil	M20-Oc17948	X														
8	LP_BH02_7.25	Oct 08, 2020		Soil	M20-Oc17949	X														

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Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
9	LP_BH02_5.5	Oct 08, 2020		Soil	M20-Oc17950	X														
Test Counts						3	3	2	2	1	2	2	4	4	3	3	3	4	2	4

ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **749763-S**
Project name KAMAY WHARF
Project ID 1564417
Received Date Oct 08, 2020

Client Sample ID			**LP_BH02_2.5**	**LP_BH02_8.2**	**D01_201008**	**TB**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Oc17942**	**M20-Oc17943**	**M20-Oc17944**	**M20-Oc17946**
Date Sampled			**Oct 08, 2020**	**Oct 08, 2020**	**Oct 08, 2020**	**Oct 08, 2020**
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	105	109	111	int
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Bromofluorobenzene (surr.)	1	%	105	109	111	-
Toluene-d8 (surr.)	1	%	78	87	89	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C10-C16 less Naphthalene (F2)[N01]	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	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
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			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Chlorinated Hydrocarbons						
1.2-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
1.2.3-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.3.4-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.3.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.4-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.2.4.5-Tetrachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.3-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
1.3.5-Trichlorobenzene	0.05	mg/kg	< 0.05	-	-	-
1.4-Dichlorobenzene	0.2	mg/kg	< 0.2	-	-	-
Benzal chloride	0.05	mg/kg	< 0.05	-	-	-
Benzotrichloride	0.05	mg/kg	< 0.05	-	-	-
Benzyl chloride	0.2	mg/kg	< 0.2	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobutadiene	0.05	mg/kg	< 0.05	-	-	-
Hexachlorocyclopentadiene	0.05	mg/kg	< 0.05	-	-	-
Hexachloroethane	0.05	mg/kg	< 0.05	-	-	-
Pentachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	INT	-	-	-
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
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	-
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Nitroaniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	-
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.3.4.6-Tetrachlorophenol	5	mg/kg	< 5	< 5	< 5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.6-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4.4'-DDT	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
b-BHC	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	-
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Endrin ketone	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	-
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Hexachloroethane	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	-
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenol-d6 (surr.)	1	%	56	37	46	-
Nitrobenzene-d5 (surr.)	1	%	55	56	74	-
2-Fluorobiphenyl (surr.)	1	%	104	71	79	-
2.4.6-Tribromophenol (surr.)	1	%	25	33	23	-
Heavy Metals						
Arsenic	2	mg/kg	< 2	8.4	< 2	-
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Chromium	5	mg/kg	< 5	32	6.9	-
Copper	5	mg/kg	< 5	< 5	< 5	-
Lead	5	mg/kg	< 5	6.7	< 5	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Nickel	5	mg/kg	< 5	< 5	< 5	-
Zinc	5	mg/kg	< 5	10	< 5	-
Tributyltin (TBT)			see attached	see attached	see attached	-
% Moisture	1	%	18	22	18	-
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	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
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	%	78	77	75	-
13C5-PFPeA (surr.)	1	%	102	85	50	-
13C5-PFHxA (surr.)	1	%	83	91	85	-
13C4-PFHpA (surr.)	1	%	87	88	84	-
13C8-PFOA (surr.)	1	%	91	87	87	-
13C5-PFNA (surr.)	1	%	73	82	56	-
13C6-PFDA (surr.)	1	%	83	82	72	-
13C2-PFUnDA (surr.)	1	%	88	93	81	-
13C2-PFDoDA (surr.)	1	%	103	101	86	-
13C2-PFTeDA (surr.)	1	%	94	107	81	-
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	%	70	73	69	-
D3-N-MeFOSA (surr.)	1	%	74	74	71	-
D5-N-EtFOSA (surr.)	1	%	78	75	72	-
D7-N-MeFOSE (surr.)	1	%	84	90	78	-
D9-N-EtFOSE (surr.)	1	%	82	89	82	-
D5-N-EtFOSAA (surr.)	1	%	133	118	107	-
D3-N-MeFOSAA (surr.)	1	%	137	120	99	-
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	%	88	90	66	-
18O2-PFHxS (surr.)	1	%	72	70	66	-
13C8-PFOS (surr.)	1	%	55	64	69	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
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	< 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	%	79	96	93	-
13C2-6:2 FTSA (surr.)	1	%	51	71	71	-
13C2-8:2 FTSA (surr.)	1	%	104	116	108	-
13C2-10:2 FTSA (surr.)	1	%	81	130	92	-
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	-
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	%	-	71	79	-
p-Terphenyl-d14 (surr.)	1	%	-	90	87	-
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-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	-
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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-BHC (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	0.1	mg/kg	-	< 0.1	< 0.1	-
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	%	-	89	91	-
Tetrachloro-m-xylene (surr.)	1	%	-	70	72	-
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	-

Client Sample ID			LP_BH02_2.5	LP_BH02_8.2	D01_201008	TB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Oc17942	M20-Oc17943	M20-Oc17944	M20-Oc17946
Date Sampled			Oct 08, 2020	Oct 08, 2020	Oct 08, 2020	Oct 08, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
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	%	-	85	95	-
Triazines						
Ametryn	0.2	mg/kg	-	< 0.2	< 0.2	-
Atraton	0.2	mg/kg	-	< 0.2	< 0.2	-
Atrazine	0.2	mg/kg	-	< 0.2	< 0.2	-
Prometon	0.2	mg/kg	-	< 0.2	< 0.2	-
Prometryn	0.2	mg/kg	-	< 0.2	< 0.2	-
Propazine	0.2	mg/kg	-	< 0.2	< 0.2	-
Simazine	0.2	mg/kg	-	< 0.2	< 0.2	-
Simetryn	0.2	mg/kg	-	< 0.2	< 0.2	-
Terbuthylazine	0.2	mg/kg	-	< 0.2	< 0.2	-
Terbutryne	0.2	mg/kg	-	< 0.2	< 0.2	-

Client Sample ID			TS
Sample Matrix			Soil
Eurofins Sample No.			M20-Oc17947
Date Sampled			Oct 08, 2020
Test/Reference	LOR	Unit	
BTEX			
Benzene	0.1	mg/kg	98
Toluene	0.1	mg/kg	99
Ethylbenzene	0.1	mg/kg	86
m&p-Xylenes	0.2	mg/kg	85
o-Xylene	0.1	mg/kg	82
Xylenes - Total*	0.3	mg/kg	84
4-Bromofluorobenzene (surr.)	1	%	60
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	130
TRH C6-C10	20	mg/kg	89
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	88

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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
BTEX	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Oct 12, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Chlorinated Hydrocarbons	Melbourne	Oct 12, 2020	14 Days
- Method: USEPA 8121 Chlorinated Hydrocarbons			
Semivolatile Organics	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Metals M8	Melbourne	Oct 12, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Polycyclic Aromatic Hydrocarbons	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Triazines	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Oct 12, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Oct 12, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Oct 12, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Oct 12, 2020	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: ERM Hunter Valley
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Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	LP_BH02_2.5	Oct 08, 2020		Soil	M20-Oc17942		X			X			X	X	X	X	X	X		X
2	LP_BH02_8.2	Oct 08, 2020		Soil	M20-Oc17943		X	X	X		X	X	X	X	X	X	X	X		X
3	D01_201008	Oct 08, 2020		Soil	M20-Oc17944		X	X	X		X	X	X	X	X	X	X	X		X
4	R01_201008	Oct 08, 2020		Water	M20-Oc17945								X	X				X		X
5	TB	Oct 08, 2020		Soil	M20-Oc17946														X	
6	TS	Oct 08, 2020		Soil	M20-Oc17947														X	
7	LP_BH02_4.0	Oct 08, 2020		Soil	M20-Oc17948	X														
8	LP_BH02_7.25	Oct 08, 2020		Soil	M20-Oc17949	X														

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Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
9	LP_BH02_5.5	Oct 08, 2020		Soil	M20-Oc17950	X														
Test Counts						3	3	2	2	1	2	2	4	4	3	3	3	4	2	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Total Recoverable Hydrocarbons							
TRH C6-C9	mg/kg	< 20			20	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							
Chlorinated Hydrocarbons							
1.2-Dichlorobenzene	mg/kg	< 0.2			0.2	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.2			0.2	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.05			0.05	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.2			0.2	Pass	
Benzal chloride	mg/kg	< 0.05			0.05	Pass	
Benzotrichloride	mg/kg	< 0.05			0.05	Pass	
Benzyl chloride	mg/kg	< 0.2			0.2	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Hexachlorobutadiene	mg/kg	< 0.05			0.05	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.05			0.05	Pass	
Hexachloroethane	mg/kg	< 0.05			0.05	Pass	
Pentachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Method Blank							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 5			5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
b-BHC	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	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			0.5	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (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	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Triazines							
Ametryn	mg/kg	< 0.2			0.2	Pass	
Atraton	mg/kg	< 0.2			0.2	Pass	
Atrazine	mg/kg	< 0.2			0.2	Pass	
Prometon	mg/kg	< 0.2			0.2	Pass	
Prometryn	mg/kg	< 0.2			0.2	Pass	
Propazine	mg/kg	< 0.2			0.2	Pass	
Simazine	mg/kg	< 0.2			0.2	Pass	
Simetryn	mg/kg	< 0.2			0.2	Pass	
Terbuthylazine	mg/kg	< 0.2			0.2	Pass	
Terbutryne	mg/kg	< 0.2			0.2	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	85			70-130	Pass	
Ethylbenzene	%	92			70-130	Pass	
m&p-Xylenes	%	92			70-130	Pass	
Xylenes - Total*	%	93			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	123			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.1.1-Trichloroethane	%	85			70-130	Pass	
1.2-Dichlorobenzene	%	93			70-130	Pass	
1.2-Dichloroethane	%	99			70-130	Pass	
Trichloroethene	%	73			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	109			70-130	Pass	
TRH >C10-C16	%	121			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	110			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	%	118			70-130	Pass	
LCS - % Recovery							
Chlorinated Hydrocarbons							
1.2-Dichlorobenzene	%	104			70-130	Pass	
1.2.3-Trichlorobenzene	%	122			70-130	Pass	
1.2.3.4-Tetrachlorobenzene	%	116			70-130	Pass	
1.2.3.5-Tetrachlorobenzene	%	90			70-130	Pass	
1.2.4-Trichlorobenzene	%	105			70-130	Pass	
1.2.4.5-Tetrachlorobenzene	%	125			70-130	Pass	
1.3-Dichlorobenzene	%	124			70-130	Pass	
1.3.5-Trichlorobenzene	%	107			70-130	Pass	
1.4-Dichlorobenzene	%	96			70-130	Pass	
Benzal chloride	%	107			70-130	Pass	
Benzotrichloride	%	101			70-130	Pass	
Hexachlorobenzene	%	115			70-130	Pass	
Hexachlorobutadiene	%	113			70-130	Pass	
Hexachlorocyclopentadiene	%	89			70-130	Pass	
Hexachloroethane	%	104			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	%	88			30-130	Pass	
2-Chlorophenol	%	117			30-130	Pass	
2-Methylphenol (o-Cresol)	%	100			30-130	Pass	
2-Nitrophenol	%	88			30-130	Pass	
2.4-Dichlorophenol	%	79			30-130	Pass	
2.4-Dimethylphenol	%	114			30-130	Pass	
2.4-Dinitrophenol	%	102			30-130	Pass	
2.4.5-Trichlorophenol	%	121			30-130	Pass	
2.4.6-Trichlorophenol	%	92			30-130	Pass	
2.6-Dichlorophenol	%	79			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	100			30-130	Pass	
4-Chloro-3-methylphenol	%	117			30-130	Pass	
4-Nitrophenol	%	96			30-130	Pass	
Acenaphthene	%	95			70-130	Pass	
Acenaphthylene	%	92			70-130	Pass	
Anthracene	%	103			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	106			70-130	Pass	
Benzo(b&j)fluoranthene	%	110			70-130	Pass	
Benzo(g.h.i)perylene	%	101			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	117			70-130	Pass	
Chrysene	%	103			70-130	Pass	
Dibenz(a.h)anthracene	%	111			70-130	Pass	
Fluoranthene	%	113			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	105			70-130	Pass	
Naphthalene	%	92			70-130	Pass	
Pentachlorophenol	%	128			30-130	Pass	
Phenanthrene	%	95			70-130	Pass	
Phenol	%	127			30-130	Pass	
Pyrene	%	118			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	111			80-120	Pass	
Copper	%	103			80-120	Pass	
Lead	%	109			80-120	Pass	
Mercury	%	104			80-120	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	102			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	139			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	106			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	92			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	103			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	102			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	111			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	106			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	75			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	108			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	96			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	108			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	104			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	99			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	105			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	84			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	128			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	99			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	129			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	119			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	64			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	95			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	133			50-150	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	113			50-150	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	109			70-130	Pass	
4.4'-DDD	%	121			70-130	Pass	
4.4'-DDE	%	114			70-130	Pass	
4.4'-DDT	%	109			70-130	Pass	
a-BHC	%	100			70-130	Pass	
Aldrin	%	121			70-130	Pass	
b-BHC	%	95			70-130	Pass	
d-BHC	%	98			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	97			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	124			70-130	Pass	
Endrin	%	99			70-130	Pass	
Endrin aldehyde	%	83			70-130	Pass	
Endrin ketone	%	123			70-130	Pass	
g-BHC (Lindane)	%	89			70-130	Pass	
Heptachlor	%	96			70-130	Pass	
Heptachlor epoxide	%	100			70-130	Pass	
Methoxychlor	%	78			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	116			70-130	Pass	
Dimethoate	%	105			70-130	Pass	
Ethion	%	116			70-130	Pass	
Fenitrothion	%	111			70-130	Pass	
Methyl parathion	%	116			70-130	Pass	
Mevinphos	%	103			70-130	Pass	
LCS - % Recovery							
Triazines							
Prometryn	%	104			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Oc21349	NCP	%	80			70-130	Pass	
Toluene	M20-Oc21349	NCP	%	83			70-130	Pass	
Ethylbenzene	M20-Oc21349	NCP	%	114			70-130	Pass	
m&p-Xylenes	M20-Oc21349	NCP	%	118			70-130	Pass	
o-Xylene	M20-Oc21349	NCP	%	127			70-130	Pass	
Xylenes - Total*	M20-Oc21349	NCP	%	121			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M20-Oc21349	NCP	%	78			70-130	Pass	
1.1.1-Trichloroethane	M20-Oc21349	NCP	%	71			70-130	Pass	
1.2-Dichlorobenzene	M20-Oc21349	NCP	%	88			70-130	Pass	
1.2-Dichloroethane	M20-Oc21349	NCP	%	119			70-130	Pass	
Trichloroethene	M20-Oc21349	NCP	%	72			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Oc21349	NCP	%	117			70-130	Pass	
TRH C6-C10	M20-Oc21349	NCP	%	111			70-130	Pass	
TRH >C10-C16	M20-Oc18071	NCP	%	120			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	M20-Oc21349	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Oc18071	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Chlorinated Hydrocarbons				Result 1					
1.2-Dichlorobenzene	S20-Se49254	NCP	%	82			70-130	Pass	
1.2.3-Trichlorobenzene	S20-Se49254	NCP	%	90			70-130	Pass	
1.2.3.4-Tetrachlorobenzene	S20-Se49254	NCP	%	91			70-130	Pass	
1.2.4.5-Tetrachlorobenzene	S20-Se49254	NCP	%	94			70-130	Pass	
1.3-Dichlorobenzene	S20-Se49254	NCP	%	74			70-130	Pass	
1.3.5-Trichlorobenzene	S20-Se49254	NCP	%	111			70-130	Pass	
1.4-Dichlorobenzene	S20-Se49254	NCP	%	103			70-130	Pass	
Hexachlorobenzene	S20-Se49254	NCP	%	90			70-130	Pass	
Hexachlorobutadiene	S20-Se49254	NCP	%	90			70-130	Pass	
Hexachloroethane	S20-Se49254	NCP	%	82			70-130	Pass	
Pentachlorobenzene	S20-Se49254	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
Acenaphthene	M20-Oc11471	NCP	%	86			70-130	Pass	
Acenaphthylene	M20-Oc11471	NCP	%	81			70-130	Pass	
Anthracene	M20-Oc11471	NCP	%	86			70-130	Pass	
Benz(a)anthracene	M20-Oc11471	NCP	%	87			70-130	Pass	
Benzo(a)pyrene	M20-Oc11471	NCP	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	M20-Oc11471	NCP	%	88			70-130	Pass	
Benzo(g.h.i)perylene	M20-Oc11471	NCP	%	80			70-130	Pass	
Benzo(k)fluoranthene	M20-Oc11471	NCP	%	96			70-130	Pass	
Chrysene	M20-Oc11471	NCP	%	83			70-130	Pass	
Dibenz(a.h)anthracene	M20-Oc11471	NCP	%	91			70-130	Pass	
Fluoranthene	M20-Oc11471	NCP	%	103			70-130	Pass	
Fluorene	M20-Oc11471	NCP	%	87			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M20-Oc11471	NCP	%	89			70-130	Pass	
Naphthalene	M20-Oc11471	NCP	%	78			70-130	Pass	
Phenanthrene	M20-Oc11471	NCP	%	93			70-130	Pass	
Pyrene	M20-Oc11471	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Oc18747	NCP	%	94			75-125	Pass	
Cadmium	M20-Oc18747	NCP	%	105			75-125	Pass	
Chromium	M20-Oc18747	NCP	%	107			75-125	Pass	
Copper	M20-Oc18747	NCP	%	101			75-125	Pass	
Lead	M20-Oc18747	NCP	%	109			75-125	Pass	
Mercury	M20-Oc18747	NCP	%	109			75-125	Pass	
Nickel	M20-Oc18747	NCP	%	100			75-125	Pass	
Zinc	M20-Oc18747	NCP	%	99			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M20-Oc18855	NCP	%	96			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanoic acid (PFPeA)	M20-Oc18855	NCP	%	76			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M20-Oc18855	NCP	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M20-Oc18855	NCP	%	99			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M20-Oc18855	NCP	%	98			50-150	Pass	
Perfluorononanoic acid (PFNA)	M20-Oc18855	NCP	%	118			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M20-Oc18855	NCP	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M20-Oc18855	NCP	%	108			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M20-Oc18855	NCP	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M20-Oc18855	NCP	%	77			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M20-Oc18855	NCP	%	102			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M20-Oc18855	NCP	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M20-Oc18855	NCP	%	105			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M20-Oc18855	NCP	%	102			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M20-Oc18855	NCP	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M20-Oc18855	NCP	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M20-Oc18855	NCP	%	84			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M20-Oc18855	NCP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M20-Oc18855	NCP	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M20-Oc18855	NCP	%	133			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M20-Oc18855	NCP	%	91			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M20-Oc18855	NCP	%	139			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M20-Oc18855	NCP	%	121			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M20-Oc18855	NCP	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M20-Oc18855	NCP	%	130			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	M20-Oc18855	NCP	%	150			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M20-Oc18855	NCP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M20-Oc18855	NCP	%	134			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M20-Oc18855	NCP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M20-Oc18855	NCP	%	101			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Oc21049	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Oc21049	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Oc21049	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Oc21049	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Oc21049	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Oc21049	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Trichloroethene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Oc21049	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Oc21049	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Oc18070	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Oc18070	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	M20-Oc21049	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Oc18070	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Oc18070	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Chlorinated Hydrocarbons				Result 1	Result 2	RPD			
1.2-Dichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
1.2.3-Trichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4-Trichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
1.3.5-Trichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Benzal chloride	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzotrichloride	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Benzyl chloride	M20-Oc18068	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Hexachlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobutadiene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorocyclopentadiene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachloroethane	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Pentachlorobenzene	M20-Oc18068	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	M20-Oc18735	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	M20-Oc18735	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	B20-Oc10452	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Oc18735	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Oc18735	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Oc18735	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Oc18735	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Oc18735	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	M20-Oc18735	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4.4'-DDD	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthene	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Oc18735	NCP	mg/kg	1.1	0.9	24	30%	Pass	
Acetophenone	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Oc18735	NCP	mg/kg	5.8	6.3	8.0	30%	Pass	
b-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Oc18735	NCP	mg/kg	12	12	6.0	30%	Pass	
Benzo(a)pyrene	M20-Oc18735	NCP	mg/kg	15	16	7.0	30%	Pass	
Benzo(b&j)fluoranthene	M20-Oc18735	NCP	mg/kg	15	16	6.0	30%	Pass	
Benzo(g.h.i)perylene	M20-Oc18735	NCP	mg/kg	12	12	5.0	30%	Pass	
Benzo(k)fluoranthene	M20-Oc18735	NCP	mg/kg	22	20	7.0	30%	Pass	
Benzyl chloride	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Oc18735	NCP	mg/kg	13	11	13	30%	Pass	
d-BHC	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Oc18735	NCP	mg/kg	3.9	4.1	6.0	30%	Pass	
Dibenz(a.j)acridine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dimethylaminoazobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Oc18735	NCP	mg/kg	26	24	9.0	30%	Pass	
Fluorene	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Oc18735	NCP	mg/kg	12	12	1.0	30%	Pass	
Methoxychlor	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Oc18735	NCP	mg/kg	< 0.5	0.6	20	30%	Pass	
Nitrobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	M20-Oc18735	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	M20-Oc18735	NCP	mg/kg	11	11	5.0	30%	Pass	
Phenol	M20-Oc18735	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Oc18735	NCP	mg/kg	29	28	2.0	30%	Pass	
Trifluralin	B20-Oc10452	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Oc18831	NCP	mg/kg	3.6	4.0	11	30%	Pass	
Cadmium	M20-Oc18831	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Oc18831	NCP	mg/kg	29	32	9.0	30%	Pass	
Copper	M20-Oc18831	NCP	mg/kg	20	21	7.0	30%	Pass	
Lead	M20-Oc18831	NCP	mg/kg	28	28	<1	30%	Pass	
Mercury	M20-Oc18831	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Oc18831	NCP	mg/kg	26	29	12	30%	Pass	
Zinc	M20-Oc18831	NCP	mg/kg	83	91	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Oc17895	NCP	%	15	16	8.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorodecanoic acid (PFDA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M20-Oc18854	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M20-Oc18854	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M20-Oc18854	NCP	ug/kg	14	17	21	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M20-Oc18854	NCP	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)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M20-Oc18854	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M20-Oc18854	NCP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Oc18735	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Oc18735	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Oc18735	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Oc18735	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Oc18735	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	M20-Oc18735	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Comments

TBT analysed by NMI; accreditation number 198; report reference RN1291739

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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

Andrew Black	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Joseph Edouard	Senior Analyst-PFAS (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **749763-W**
Project name KAMAY WHARF
Project ID 1564417
Received Date Oct 08, 2020

Client Sample ID			**R01_201008**
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Oc17945**
Date Sampled			**Oct 08, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Client Sample ID			R01_201008
Sample Matrix			Water
Eurofins Sample No.			M20-Oc17945
Date Sampled			Oct 08, 2020
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	71
13C5-PFPeA (surr.)	1	%	81
13C5-PFHxA (surr.)	1	%	96
13C4-PFHpA (surr.)	1	%	95
13C8-PFOA (surr.)	1	%	93
13C5-PFNA (surr.)	1	%	81
13C6-PFDA (surr.)	1	%	64
13C2-PFUnDA (surr.)	1	%	47
13C2-PFDoDA (surr.)	1	%	28
13C2-PFTeDA (surr.)	1	%	22
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05
13C8-FOSA (surr.)	1	%	32
D3-N-MeFOSA (surr.)	1	%	int
D5-N-EtFOSA (surr.)	1	%	int
D7-N-MeFOSE (surr.)	1	%	15
D9-N-EtFOSE (surr.)	1	%	16
D5-N-EtFOSAA (surr.)	1	%	31
D3-N-MeFOSAA (surr.)	1	%	51
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	93

Client Sample ID			R01_201008
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Oc17945**
Date Sampled			**Oct 08, 2020**
Test/Reference	LOR	Unit	
Perfluoroalkyl sulfonic acids (PFSAs)			
18O2-PFHxS (surr.)	1	%	82
13C8-PFOS (surr.)	1	%	57
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01
13C2-4:2 FTSA (surr.)	1	%	43
13C2-6:2 FTSA (surr.)	1	%	66
13C2-8:2 FTSA (surr.)	1	%	90
13C2-10:2 FTSA (surr.)	1	%	34
PFASs Summations			
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Melbourne	Oct 12, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 12, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Oct 13, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Melbourne	Oct 12, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Melbourne	Oct 12, 2020	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**															
1	LP_BH02_2.5	Oct 08, 2020		Soil	M20-Oc17942		X			X			X	X	X	X	X	X		X
2	LP_BH02_8.2	Oct 08, 2020		Soil	M20-Oc17943		X	X	X		X	X	X	X	X	X	X	X		X
3	D01_201008	Oct 08, 2020		Soil	M20-Oc17944		X	X	X		X	X	X	X	X	X	X	X		X
4	R01_201008	Oct 08, 2020		Water	M20-Oc17945								X	X				X		X
5	TB	Oct 08, 2020		Soil	M20-Oc17946														X	
6	TS	Oct 08, 2020		Soil	M20-Oc17947														X	
7	LP_BH02_4.0	Oct 08, 2020		Soil	M20-Oc17948	X														
8	LP_BH02_7.25	Oct 08, 2020		Soil	M20-Oc17949	X														

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Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 1564417

Order No.:
Report #: 749763
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 8, 2020 4:30 PM
Due: Oct 15, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Tributyltin (TBT)	Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Chlorinated Hydrocarbons	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons	BTEXN and Volatile TRH	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217																				
Brisbane Laboratory - NATA Site # 20794																				
Perth Laboratory - NATA Site # 23736																				
Mayfield Laboratory																				
External Laboratory							X													
9	LP_BH02_5.5	Oct 08, 2020		Soil	M20-Oc17950	X														
Test Counts						3	3	2	2	1	2	2	4	4	3	3	3	4	2	4

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	111			70-130	Pass	
TRH C10-C14	%	93			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	100			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	90			70-130	Pass	
TRH C6-C10	%	105			70-130	Pass	
TRH >C10-C16	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	90			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	89			80-120	Pass	
Mercury	%	85			80-120	Pass	
Nickel	%	98			80-120	Pass	
Zinc	%	99			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	73			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	86			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	65			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	61			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	71			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	67			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	79			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	84			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorododecanoic acid (PFDoDA)	%	89			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	107			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	88			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	72			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	71			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	77			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	60			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	74			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	72			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	70			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	65			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	63			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	55			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	71			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	78			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	64			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	73			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	57			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	73			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	115			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	82			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	68			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	M20-Oc18407	NCP	%	104			70-130	Pass	
TRH C10-C14	M20-Oc18389	NCP	%	102			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Oc18407	NCP	%	99			70-130	Pass	
Toluene	M20-Oc18407	NCP	%	104			70-130	Pass	
Ethylbenzene	M20-Oc18407	NCP	%	114			70-130	Pass	
m&p-Xylenes	M20-Oc18407	NCP	%	105			70-130	Pass	
o-Xylene	M20-Oc18407	NCP	%	100			70-130	Pass	
Xylenes - Total*	M20-Oc18407	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Oc18407	NCP	%	93			70-130	Pass	
TRH C6-C10	M20-Oc18407	NCP	%	94			70-130	Pass	
TRH >C10-C16	M20-Oc18389	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Oc17945	CP	%	94			75-125	Pass	
Cadmium	M20-Oc17945	CP	%	98			75-125	Pass	
Chromium	M20-Oc17945	CP	%	88			75-125	Pass	
Copper	M20-Oc17945	CP	%	94			75-125	Pass	
Lead	M20-Oc17945	CP	%	87			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	M20-Oc17945	CP	%	86			75-125	Pass	
Nickel	M20-Oc17945	CP	%	95			75-125	Pass	
Zinc	M20-Oc17945	CP	%	97			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	M20-Oc17756	NCP	%	89			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	M20-Oc17756	NCP	%	101			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	M20-Oc17756	NCP	%	79			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	M20-Oc17756	NCP	%	75			50-150	Pass	
Perfluorooctanoic acid (PFOA)	M20-Oc17756	NCP	%	80			50-150	Pass	
Perfluorononanoic acid (PFNA)	M20-Oc17756	NCP	%	61			50-150	Pass	
Perfluorodecanoic acid (PFDA)	M20-Oc17756	NCP	%	81			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	M20-Oc17756	NCP	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	M20-Oc17756	NCP	%	119			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	M20-Oc17756	NCP	%	96			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M20-Oc17756	NCP	%	106			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	M20-Oc17756	NCP	%	107			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M20-Oc17756	NCP	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M20-Oc17756	NCP	%	100			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M20-Oc17756	NCP	%	67			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M20-Oc17756	NCP	%	80			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M20-Oc17756	NCP	%	82			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M20-Oc17756	NCP	%	71			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	M20-Oc17756	NCP	%	77			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	M20-Oc17756	NCP	%	69			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M20-Oc17756	NCP	%	62			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	M20-Oc17756	NCP	%	INT			50-150	Fail	Q05
Perfluorohexanesulfonic acid (PFHxS)	M20-Oc17756	NCP	%	INT			50-150	Fail	Q05
Perfluoroheptanesulfonic acid (PFHpS)	M20-Oc17756	NCP	%	117			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	M20-Oc17756	NCP	%	INT			50-150	Fail	Q05
Perfluorodecanesulfonic acid (PFDS)	M20-Oc17756	NCP	%	69			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	M20-Oc17756	NCP	%	88			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M20-Oc17756	NCP	%	126			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M20-Oc17756	NCP	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M20-Oc17756	NCP	%	131			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	M20-Oc18406	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	P20-Oc15115	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	P20-Oc15115	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	P20-Oc15115	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Oc18406	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Oc18406	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Oc18406	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Oc18406	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Oc18406	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-Oc18406	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Oc18406	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Oc18406	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	P20-Oc15115	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	P20-Oc15115	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	P20-Oc15115	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Oc17945	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M20-Oc17945	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Oc17945	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M20-Oc17945	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M20-Oc17945	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M20-Oc17945	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M20-Oc17945	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M20-Oc17945	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	M20-Oc17753	NCP	ug/L	0.08	0.10	19	30%	Pass	
Perfluoropentanoic acid (PFPeA)	M20-Oc17753	NCP	ug/L	0.06	0.06	1.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	M20-Oc17753	NCP	ug/L	0.18	0.18	1.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	M20-Oc17753	NCP	ug/L	0.03	0.03	1.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	M20-Oc17753	NCP	ug/L	0.06	0.05	2.0	30%	Pass	
Perfluorononanoic acid (PFNA)	M20-Oc17753	NCP	ug/L	0.55	0.56	2.0	30%	Pass	
Perfluorodecanoic acid (PFDA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	M20-Oc17753	NCP	ug/L	0.08	0.03	94	30%	Fail	Q15
Perfluorododecanoic acid (PFDoDA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	M20-Oc17753	NCP	ug/L	0.13	0.19	34	30%	Fail	Q15
Perfluorononanesulfonic acid (PFNS)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	M20-Oc17753	NCP	ug/L	0.02	0.04	45	30%	Fail	Q15
Perfluoropentanesulfonic acid (PFPeS)	M20-Oc17753	NCP	ug/L	0.11	0.11	2.0	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	M20-Oc17753	NCP	ug/L	2.0	2.0	1.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	M20-Oc17753	NCP	ug/L	0.04	0.05	2.0	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	M20-Oc16058	NCP	ug/L	3.9	3.8	4.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<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)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	M20-Oc17753	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	M20-Oc17753	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
N15	Where the native PFAS compound does not have labelled analogue then the quantification is made using the Extracted Internal Standard Analyte with the closest retention time to the analyte and no recovery correction has been made (Internal Standard Quantitation).
Q05	The matrix spike concentration is less than five times the background concentration in the sample - therefore the spike recovery cannot be determined
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Andrew Black	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Joseph Edouard	Senior Analyst-PFAS (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

☑ **Sydney Laboratory** Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 | 02 9900 8400 | EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172 | 07 3902 4600 | EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2, 91 Leach Highway, Kewdale WA 6105 | 08 9251 9600 | EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 2 Kingston Town Close, Oakleigh, VIC 3166 | 03 8564 5000 | EnviroSampleVic@eurofins.com

Company	ERM	Project №	0564417	Project Manager	Ian Batterley.
Address	1/45 Watt St, Newcastle	Project Name	Kamay wharf	EDD Format (ESdat, EQuIS, Custom)	Esdat
Contact Name	Tenille Coole			Sampler(s)	~~Jaimie Soper~~ T. Coole.
Phone №	0432482760			Handed over by	~~Jaimie Soper~~ T. Coole
Special Directions				Email for Invoice	au.accounts@erm.com
Purchase Order				Email for Results	Tenille.coole@erm.com, +PM.
Quote ID №					

Analyses: TRH, BTEXN & PAH (B4) | ~~TRH C6-C40 & BTEX~~ | ~~TRH Aromatic/Aliphatic (CWG NEPM Speciation)~~ | PAH | SVOCs / VOCs | metals | Triazine | atrazine | OCP / OPP

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	TRH, BTEXN & PAH (B4)	~~TRH C6-C40 & BTEX~~	~~TRH Aromatic/Aliphatic~~	PAH	SVOCs / VOCs	metals	Triazine	atrazine	OCP / OPP					Containers: 1L Plastic	250mL Plastic	125mL Plastic	60mL Preserved Inorganics Plastic/Bottle	60mL Metals Preserved Plastic	500mL Inorganics Plastic	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	LP_BH03_1.0	13.10.20	S	X			X	X	X	X	X	X													
2	R01_131020	13.10.20	W	X			X	X	X	X	X	X													
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									Please send 101 14 19 to ALS for analysis on Standard TAT
16																									
17																									
	Total Counts																								

Turnaround Time (TAT) Requirements (Default will be 5 days if not ticked)

☐ Overnight (9am)*
☐ 1 Day* ☐ 2 Day*
☐ 3 Day* ☑ 5 Day
* Surcharges apply
☐ Other ( )

Date/Time: 15/10/20 1:30PM
Chilled: Yes / No (Yes circled)
Temp: 9.3
9.3
Correction:
Final Temp: 9.3

Method of Shipment	☑ Courier - Collected from site by Eurofins ☐ Hand Delivered ☐ Postal	Name	Tenille Coole	Signature	T. Coole.	Date	15.10.20	Time
Eurofins | mgt Laboratory Use Only	Received By	SUE	SYD | BNE | MEL | PER | ADL | NTL | DRW (NTL circled)	Signature	[signature]	Date 15.10.20	Time 1.30PM	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date _/_/_	Time _:_	Report № 750954

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

 QS3008_R7 Modified by: Dr. R Symons Approved by: T. Lakeland Approved on: 17 August 2017

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

eurofins | Environment Testing

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

Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 056417

Order No.:
Report #: 750954
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 15, 2020 1:30 PM
Due: Oct 22, 2020
Priority: 5 Day
Contact Name: Tenille Cook

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	LP_BH03_1.0	Oct 13, 2020		Soil	M20-Oc28096	X	X	X	X	X	X	X	X	X	X
2	R01_131020	Oct 13, 2020		Water	M20-Oc28097	X	X	X	X	X	X	X		X	X
Test Counts						2	2	2	2	2	2	2	1	2	2

ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Tenille Cook**

Report **750954-S**
Project name KAMAY WHARF
Project ID 056417
Received Date Oct 15, 2020

Client Sample ID			**LP_BH03_1.0**
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Oc28096**
Date Sampled			**Oct 13, 2020**
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	%	106
Volatile Organics			
1.1-Dichloroethane	0.5	mg/kg	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5

Client Sample ID			LP_BH03_1.0
Sample Matrix			Soil
Eurofins Sample No.			M20-Oc28096
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Volatile Organics			
Benzene	0.1	mg/kg	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5
Bromoform	0.5	mg/kg	< 0.5
Bromomethane	0.5	mg/kg	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5
Chloroethane	0.5	mg/kg	< 0.5
Chloroform	0.5	mg/kg	< 0.5
Chloromethane	0.5	mg/kg	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1
Iodomethane	0.5	mg/kg	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5
o-Xylene	0.1	mg/kg	< 0.1
Styrene	0.5	mg/kg	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5
Toluene	0.1	mg/kg	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3
Total MAH*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5
4-Bromofluorobenzene (surr.)	1	%	106
Toluene-d8 (surr.)	1	%	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100

Client Sample ID			LP_BH03_1.0
Sample Matrix			Soil
Eurofins Sample No.			M20-Oc28096
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	65
p-Terphenyl-d14 (surr.)	1	%	56
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-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	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-BHC (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	0.1	mg/kg	< 0.1
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	%	80
Tetrachloro-m-xylene (surr.)	1	%	111

Client Sample ID			LP_BH03_1.0
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Oc28096**
Date Sampled			**Oct 13, 2020**
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	77
Triazines			
Ametryn	0.2	mg/kg	< 0.2
Atraton	0.2	mg/kg	< 0.2
Atrazine	0.2	mg/kg	< 0.2
Prometon	0.2	mg/kg	< 0.2
Prometryn	0.2	mg/kg	< 0.2
Propazine	0.2	mg/kg	< 0.2
Simazine	0.2	mg/kg	< 0.2
Simetryn	0.2	mg/kg	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2
Terbutryne	0.2	mg/kg	< 0.2

Client Sample ID			LP_BH03_1.0
Sample Matrix			Soil
Eurofins Sample No.			M20-Oc28096
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Semivolatile Organics			
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5
2-Nitroaniline	0.5	mg/kg	< 0.5
2-Nitrophenol	1.0	mg/kg	< 1
2-Picoline	0.5	mg/kg	< 0.5
2.3.4.6-Tetrachlorophenol	5	mg/kg	< 5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
2.6-Dinitrotoluene	0.5	mg/kg	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
4.4'-DDD	0.5	mg/kg	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5
4.4'-DDT	0.5	mg/kg	< 0.5
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5
a-BHC	0.5	mg/kg	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Acetophenone	0.5	mg/kg	< 0.5
Aldrin	0.5	mg/kg	< 0.5

Client Sample ID			LP_BH03_1.0
Sample Matrix			Soil
Eurofins Sample No.			M20-Oc28096
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Semivolatile Organics			
Aniline	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5
Bis(2-ethylhexyl)phthalate	0.5	mg/kg	< 0.5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
d-BHC	0.5	mg/kg	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5
Dieldrin	0.5	mg/kg	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5
Endrin	0.5	mg/kg	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5
Heptachlor	0.5	mg/kg	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5
Hexachlorocyclopentadiene	0.5	mg/kg	< 0.5
Hexachloroethane	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Methoxychlor	0.5	mg/kg	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5

Client Sample ID			LP_BH03_1.0
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Oc28096**
Date Sampled			**Oct 13, 2020**
Test/Reference	LOR	Unit	
Semivolatile Organics			
Pentachlorophenol	1	mg/kg	< 1
Phenanthrene	0.5	mg/kg	< 0.5
Phenol	0.5	mg/kg	< 0.5
Pronamide	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Trifluralin	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	64
Nitrobenzene-d5 (surr.)	1	%	84
2-Fluorobiphenyl (surr.)	1	%	65
2.4.6-Tribromophenol (surr.)	1	%	36
Heavy Metals			
Arsenic	2	mg/kg	< 2
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	6.3
Copper	5	mg/kg	< 5
Lead	5	mg/kg	< 5
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	< 5
% Moisture	1	%	24

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 19, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX and Naphthalene			
BTEX	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Oct 19, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Polycyclic Aromatic Hydrocarbons	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Triazines	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
Semivolatile Organics	Melbourne	Oct 19, 2020	14 Days
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Metals M8	Melbourne	Oct 19, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Oct 16, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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IANZ # 1290

Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: KAMAY WHARF
Project ID: 056417

Order No.:
Report #: 750954
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 15, 2020 1:30 PM
Due: Oct 22, 2020
Priority: 5 Day
Contact Name: Tenille Cook

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	LP_BH03_1.0	Oct 13, 2020		Soil	M20-Oc28096	X	X	X	X	X	X	X	X	X	X
2	R01_131020	Oct 13, 2020		Water	M20-Oc28097	X	X	X	X	X	X	X		X	X
Test Counts						2	2	2	2	2	2	2	1	2	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
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							
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Triazines							
Ametryn	mg/kg	< 0.2			0.2	Pass	
Atraton	mg/kg	< 0.2			0.2	Pass	
Atrazine	mg/kg	< 0.2			0.2	Pass	
Prometon	mg/kg	< 0.2			0.2	Pass	
Prometryn	mg/kg	< 0.2			0.2	Pass	
Propazine	mg/kg	< 0.2			0.2	Pass	
Simazine	mg/kg	< 0.2			0.2	Pass	
Simetryn	mg/kg	< 0.2			0.2	Pass	
Terbuthylazine	mg/kg	< 0.2			0.2	Pass	
Terbutryne	mg/kg	< 0.2			0.2	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 0.5			0.5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 5			5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 0.5			0.5	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.5			0.5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 0.5			0.5	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	99			70-130	Pass	
TRH C10-C14	%	112			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	102			70-130	Pass	
Xylenes - Total*	%	108			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Volatile Organics							
1.1-Dichloroethene	%	91			70-130	Pass	
1.1.1-Trichloroethane	%	94			70-130	Pass	
1.2-Dichlorobenzene	%	108			70-130	Pass	
1.2-Dichloroethane	%	107			70-130	Pass	
Trichloroethene	%	105			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	88			70-130	Pass	
TRH >C10-C16	%	118			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	99			70-130	Pass	
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	112			70-130	Pass	
Benz(a)anthracene	%	87			70-130	Pass	
Benzo(a)pyrene	%	109			70-130	Pass	
Benzo(b&j)fluoranthene	%	95			70-130	Pass	
Benzo(g.h.i)perylene	%	87			70-130	Pass	
Benzo(k)fluoranthene	%	96			70-130	Pass	
Chrysene	%	107			70-130	Pass	
Dibenz(a.h)anthracene	%	117			70-130	Pass	
Fluoranthene	%	109			70-130	Pass	
Fluorene	%	103			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	107			70-130	Pass	
Naphthalene	%	94			70-130	Pass	
Phenanthrene	%	95			70-130	Pass	
Pyrene	%	118			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	106			70-130	Pass	
4.4'-DDD	%	92			70-130	Pass	
4.4'-DDE	%	94			70-130	Pass	
4.4'-DDT	%	105			70-130	Pass	
a-BHC	%	116			70-130	Pass	
Aldrin	%	111			70-130	Pass	
b-BHC	%	115			70-130	Pass	
d-BHC	%	116			70-130	Pass	
Dieldrin	%	80			70-130	Pass	
Endosulfan I	%	118			70-130	Pass	
Endosulfan II	%	119			70-130	Pass	
Endosulfan sulphate	%	96			70-130	Pass	
Endrin	%	114			70-130	Pass	
Endrin aldehyde	%	104			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	110			70-130	Pass	
Heptachlor	%	117			70-130	Pass	
Heptachlor epoxide	%	125			70-130	Pass	
Hexachlorobenzene	%	94			70-130	Pass	
Methoxychlor	%	71			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	126			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dimethoate	%	104			70-130	Pass	
Ethion	%	101			70-130	Pass	
Fenitrothion	%	121			70-130	Pass	
Methyl parathion	%	102			70-130	Pass	
Mevinphos	%	97			70-130	Pass	
LCS - % Recovery							
Triazines							
Prometryn	%	104			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	%	75			30-130	Pass	
2-Chlorophenol	%	101			30-130	Pass	
2-Methylphenol (o-Cresol)	%	71			30-130	Pass	
2-Nitrophenol	%	63			30-130	Pass	
2.4-Dichlorophenol	%	58			30-130	Pass	
2.4-Dimethylphenol	%	77			30-130	Pass	
2.4-Dinitrophenol	%	104			30-130	Pass	
2.4.5-Trichlorophenol	%	107			30-130	Pass	
2.4.6-Trichlorophenol	%	59			30-130	Pass	
2.6-Dichlorophenol	%	77			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	89			30-130	Pass	
4-Chloro-3-methylphenol	%	82			30-130	Pass	
4-Nitrophenol	%	32			30-130	Pass	
Pentachlorophenol	%	80			30-130	Pass	
Phenol	%	96			30-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	89			80-120	Pass	
Chromium	%	101			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	99			80-120	Pass	
Mercury	%	90			80-120	Pass	
Nickel	%	93			80-120	Pass	
Zinc	%	97			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Oc27159	NCP	%	116			70-130	Pass	
TRH C10-C14	B20-Oc21952	NCP	%	115			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Oc27140	NCP	%	107			70-130	Pass	
Toluene	M20-Oc27140	NCP	%	99			70-130	Pass	
Ethylbenzene	M20-Oc27140	NCP	%	106			70-130	Pass	
m&p-Xylenes	M20-Oc27140	NCP	%	102			70-130	Pass	
o-Xylene	M20-Oc27140	NCP	%	100			70-130	Pass	
Xylenes - Total*	M20-Oc27140	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	M20-Oc27140	NCP	%	76			70-130	Pass	
1.1.1-Trichloroethane	M20-Oc27140	NCP	%	85			70-130	Pass	
1.2-Dichlorobenzene	M20-Oc27140	NCP	%	113			70-130	Pass	
1.2-Dichloroethane	M20-Oc27140	NCP	%	105			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Trichloroethene	M20-Oc27140	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Oc27140	NCP	%	107			70-130	Pass	
TRH C6-C10	M20-Oc27159	NCP	%	110			70-130	Pass	
TRH >C10-C16	B20-Oc21952	NCP	%	116			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M20-Oc29629	NCP	%	120			70-130	Pass	
Acenaphthylene	M20-Oc29629	NCP	%	101			70-130	Pass	
Anthracene	M20-Oc29629	NCP	%	80			70-130	Pass	
Benz(a)anthracene	M20-Oc29629	NCP	%	101			70-130	Pass	
Benzo(a)pyrene	M20-Oc29629	NCP	%	83			70-130	Pass	
Benzo(b&j)fluoranthene	M20-Oc29629	NCP	%	95			70-130	Pass	
Benzo(g.h.i)perylene	M20-Oc29629	NCP	%	113			70-130	Pass	
Benzo(k)fluoranthene	M20-Oc29629	NCP	%	101			70-130	Pass	
Chrysene	M20-Oc29629	NCP	%	118			70-130	Pass	
Dibenz(a.h)anthracene	M20-Oc29629	NCP	%	92			70-130	Pass	
Fluoranthene	M20-Oc29629	NCP	%	96			70-130	Pass	
Fluorene	M20-Oc29629	NCP	%	80			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M20-Oc29629	NCP	%	82			70-130	Pass	
Naphthalene	M20-Oc29629	NCP	%	113			70-130	Pass	
Phenanthrene	M20-Oc29629	NCP	%	81			70-130	Pass	
Pyrene	M20-Oc29629	NCP	%	102			70-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
2-Methyl-4.6-dinitrophenol	M20-Oc29629	NCP	%	32			30-130	Pass	
2-Chlorophenol	M20-Oc29629	NCP	%	109			30-130	Pass	
2-Methylphenol (o-Cresol)	M20-Oc29629	NCP	%	75			30-130	Pass	
2-Nitrophenol	M20-Oc29629	NCP	%	67			30-130	Pass	
2.4-Dichlorophenol	M20-Oc29629	NCP	%	121			30-130	Pass	
2.4-Dimethylphenol	M20-Oc29629	NCP	%	80			30-130	Pass	
2.4-Dinitrophenol	M20-Oc29629	NCP	%	32			30-130	Pass	
2.4.5-Trichlorophenol	M20-Oc29629	NCP	%	120			30-130	Pass	
2.4.6-Trichlorophenol	M20-Oc29629	NCP	%	68			30-130	Pass	
2.6-Dichlorophenol	M20-Oc29629	NCP	%	87			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Oc29629	NCP	%	75			30-130	Pass	
4-Chloro-3-methylphenol	M20-Oc29629	NCP	%	81			30-130	Pass	
4-Nitrophenol	M20-Oc29629	NCP	%	44			30-130	Pass	
Pentachlorophenol	M20-Oc29629	NCP	%	85			30-130	Pass	
Phenol	M20-Oc29629	NCP	%	100			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Oc27761	NCP	%	78			75-125	Pass	
Cadmium	M20-Oc27761	NCP	%	101			75-125	Pass	
Chromium	M20-Oc27761	NCP	%	69			75-125	Fail	Q08
Copper	M20-Oc27761	NCP	%	71			75-125	Fail	Q08
Lead	M20-Oc27761	NCP	%	76			75-125	Pass	
Mercury	M20-Oc27761	NCP	%	115			75-125	Pass	
Nickel	M20-Oc27761	NCP	%	56			75-125	Fail	Q08
Zinc	M20-Oc27761	NCP	%	88			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Oc29392	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Oc31741	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Oc31741	NCP	mg/kg	230	180	24	30%	Pass	
TRH C29-C36	M20-Oc31741	NCP	mg/kg	380	320	19	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Oc29392	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Oc29392	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Oc29392	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Oc29392	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Oc29392	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Oc29392	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Isopropyl benzene (Cumene)	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Oc29392	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Oc29392	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Oc31741	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Oc31741	NCP	mg/kg	510	410	21	30%	Pass	
TRH >C34-C40	M20-Oc31741	NCP	mg/kg	390	320	22	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Oc29627	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Hexachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Oc29627	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Oc29627	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Oc29627	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Oc29627	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	M20-Oc29627	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M20-Oc29627	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitrophenol	M20-Oc29627	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	M20-Oc29627	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dichlorophenol	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	M20-Oc29627	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	M20-Oc29627	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	M20-Oc29627	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M20-Oc29627	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	M20-Oc29627	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Nitrophenol	M20-Oc29627	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
4.4'-DDD	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Butyl benzyl phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dibenz(a.j)acridine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachloroethane	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	M20-Oc29627	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	M20-Oc29627	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Oc27761	NCP	mg/kg	13	13	3.0	30%	Pass	
Cadmium	M20-Oc27761	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Oc27761	NCP	mg/kg	56	58	5.0	30%	Pass	
Copper	M20-Oc27761	NCP	mg/kg	26	27	4.0	30%	Pass	
Lead	M20-Oc27761	NCP	mg/kg	9.0	9.4	4.0	30%	Pass	
Mercury	M20-Oc27761	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Oc27761	NCP	mg/kg	79	82	4.0	30%	Pass	
Zinc	M20-Oc27761	NCP	mg/kg	62	64	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Oc28493	NCP	%	14	14	2.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
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
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Andrew Black	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Hunter Valley
Level 1 / 45 Watt Street
Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Tenille Cook**

Report **750954-W**
Project name KAMAY WHARF
Project ID 056417
Received Date Oct 15, 2020

Client Sample ID			**R01_131020**
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Oc28097**
Date Sampled			**Oct 13, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	106
Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001
2-Propanone (Acetone)	0.001	mg/L	0.004
4-Chlorotoluene	0.001	mg/L	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001
Allyl chloride	0.001	mg/L	< 0.001

Client Sample ID			R01_131020
Sample Matrix			Water
Eurofins Sample No.			M20-Oc28097
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Volatile Organics			
Benzene	0.001	mg/L	< 0.001
Bromobenzene	0.001	mg/L	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.001	mg/L	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroethane	0.001	mg/L	< 0.001
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.001	mg/L	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001
o-Xylene	0.001	mg/L	< 0.001
Styrene	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
Total MAH*	0.003	mg/L	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005
4-Bromofluorobenzene (surr.)	1	%	106
Toluene-d8 (surr.)	1	%	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1

Client Sample ID			R01_131020
Sample Matrix			Water
Eurofins Sample No.			M20-Oc28097
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	58
p-Terphenyl-d14 (surr.)	1	%	82
Organochlorine Pesticides			
Chlordanes - Total	0.002	mg/L	< 0.002
4.4'-DDD	0.0002	mg/L	< 0.0002
4.4'-DDE	0.0002	mg/L	< 0.0002
4.4'-DDT	0.0002	mg/L	< 0.0002
a-BHC	0.0002	mg/L	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002
b-BHC	0.0002	mg/L	< 0.0002
d-BHC	0.0002	mg/L	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002
Endrin	0.0002	mg/L	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002
g-BHC (Lindane)	0.0002	mg/L	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002
Toxaphene	0.001	mg/L	< 0.001
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002
Dibutylchlorendate (surr.)	1	%	50
Tetrachloro-m-xylene (surr.)	1	%	57

Client Sample ID			R01_131020
Sample Matrix			Water
Eurofins Sample No.			M20-Oc28097
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Azinphos-methyl	0.002	mg/L	< 0.002
Bolstar	0.002	mg/L	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002
Coumaphos	0.02	mg/L	< 0.02
Demeton-S	0.02	mg/L	< 0.02
Demeton-O	0.002	mg/L	< 0.002
Diazinon	0.002	mg/L	< 0.002
Dichlorvos	0.002	mg/L	< 0.002
Dimethoate	0.002	mg/L	< 0.002
Disulfoton	0.002	mg/L	< 0.002
EPN	0.002	mg/L	< 0.002
Ethion	0.002	mg/L	< 0.002
Ethoprop	0.002	mg/L	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002
Fenitrothion	0.002	mg/L	< 0.002
Fensulfothion	0.002	mg/L	< 0.002
Fenthion	0.002	mg/L	< 0.002
Malathion	0.002	mg/L	< 0.002
Merphos	0.002	mg/L	< 0.002
Methyl parathion	0.002	mg/L	< 0.002
Mevinphos	0.002	mg/L	< 0.002
Monocrotophos	0.002	mg/L	< 0.002
Naled	0.002	mg/L	< 0.002
Omethoate	0.002	mg/L	< 0.002
Phorate	0.002	mg/L	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02
Pyrazophos	0.002	mg/L	< 0.002
Ronnel	0.002	mg/L	< 0.002
Terbufos	0.002	mg/L	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002
Tokuthion	0.002	mg/L	< 0.002
Trichloronate	0.002	mg/L	< 0.002
Triphenylphosphate (surr.)	1	%	92
Triazines			
Ametryn	0.002	mg/L	< 0.002
Atraton	0.002	mg/L	< 0.002
Atrazine	0.002	mg/L	< 0.002
Prometon	0.002	mg/L	< 0.002
Prometryn	0.002	mg/L	< 0.002
Propazine	0.002	mg/L	< 0.002
Simazine	0.002	mg/L	< 0.002
Simetryn	0.002	mg/L	< 0.002
Terbuthylazine	0.002	mg/L	< 0.002
Terbutryne	0.002	mg/L	< 0.002

Client Sample ID			R01_131020
Sample Matrix			Water
Eurofins Sample No.			M20-Oc28097
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Semivolatile Organics			
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003
2-Methylnaphthalene	0.005	mg/L	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01
2-Picoline	0.005	mg/L	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01
2.4-Dichlorophenol	0.003	mg/L	< 0.003
2.4-Dimethylphenol	0.003	mg/L	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005
a-BHC	0.005	mg/L	< 0.005
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Acetophenone	0.005	mg/L	< 0.005
Aldrin	0.005	mg/L	< 0.005
Aniline	0.005	mg/L	< 0.005
Anthracene	0.001	mg/L	< 0.001
b-BHC	0.005	mg/L	< 0.005

Client Sample ID			R01_131020
Sample Matrix			Water
Eurofins Sample No.			M20-Oc28097
Date Sampled			Oct 13, 2020
Test/Reference	LOR	Unit	
Semivolatile Organics			
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005
Chrysene	0.001	mg/L	< 0.001
d-BHC	0.005	mg/L	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005
Dieldrin	0.005	mg/L	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005
Diphenylamine	0.005	mg/L	< 0.005
Endosulfan I	0.005	mg/L	< 0.005
Endosulfan II	0.005	mg/L	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005
Endrin	0.005	mg/L	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005
Endrin ketone	0.005	mg/L	< 0.005
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
g-BHC (Lindane)	0.005	mg/L	< 0.005
Heptachlor	0.005	mg/L	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Methoxychlor	0.005	mg/L	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005
Naphthalene	0.001	mg/L	< 0.001
Nitrobenzene	0.05	mg/L	< 0.05
Pentachlorobenzene	0.005	mg/L	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01
Phenanthrene	0.001	mg/L	< 0.001
Phenol	0.003	mg/L	< 0.003

Client Sample ID			R01_131020
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Oc28097**
Date Sampled			**Oct 13, 2020**
Test/Reference	LOR	Unit	
Semivolatile Organics			
Pronamide	0.005	mg/L	< 0.005
Pyrene	0.001	mg/L	< 0.001
Trifluralin	0.005	mg/L	< 0.005
Phenol-d6 (surr.)	1	%	31
Nitrobenzene-d5 (surr.)	1	%	55
2-Fluorobiphenyl (surr.)	1	%	58
2.4.6-Tribromophenol (surr.)	1	%	38
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Oct 16, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX and Naphthalene			
BTEX	Melbourne	Oct 16, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices (USEPA 8260)			
Polycyclic Aromatic Hydrocarbons	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Triazines	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2210 Triazine Herbicides in Soil and Water by GC-MS/MS			
Semivolatile Organics	Melbourne	Oct 16, 2020	7 Days
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Metals M8	Melbourne	Oct 16, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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Company Name: ERM Hunter Valley
Address: Level 1 / 45 Watt Street
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Project Name: KAMAY WHARF
Project ID: 056417

Order No.:
Report #: 750954
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Oct 15, 2020 1:30 PM
Due: Oct 22, 2020
Priority: 5 Day
Contact Name: Tenille Cook

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Polycyclic Aromatic Hydrocarbons	Organochlorine Pesticides	Organophosphorus Pesticides	Triazines	Metals M8	BTEX and Naphthalene	Volatile Organics	Moisture Set	Semivolatile Organics	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217															
Brisbane Laboratory - NATA Site # 20794															
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	LP_BH03_1.0	Oct 13, 2020		Soil	M20-Oc28096	X	X	X	X	X	X	X	X	X	X
2	R01_131020	Oct 13, 2020		Water	M20-Oc28097	X	X	X	X	X	X	X		X	X
Test Counts						2	2	2	2	2	2	2	1	2	2

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	106			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	121			70-130	Pass	
Toluene	%	111			70-130	Pass	
Ethylbenzene	%	120			70-130	Pass	
m&p-Xylenes	%	121			70-130	Pass	
Xylenes - Total*	%	121			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	90			70-130	Pass	
1.1.1-Trichloroethane	%	115			70-130	Pass	
1.2-Dichlorobenzene	%	96			70-130	Pass	
1.2-Dichloroethane	%	98			70-130	Pass	
Trichloroethene	%	106			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	99			70-130	Pass	
TRH C6-C10	%	108			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	94			80-120	Pass	
Cadmium	%	94			80-120	Pass	
Chromium	%	95			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	93			80-120	Pass	
Mercury	%	87			80-120	Pass	
Nickel	%	98			80-120	Pass	
Zinc	%	95			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Oc35862	NCP	%	118			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Oc35862	NCP	%	101			70-130	Pass	
Toluene	M20-Oc35862	NCP	%	115			70-130	Pass	
Ethylbenzene	M20-Oc35862	NCP	%	113			70-130	Pass	
m&p-Xylenes	M20-Oc35862	NCP	%	114			70-130	Pass	
o-Xylene	M20-Oc35862	NCP	%	111			70-130	Pass	
Xylenes - Total*	M20-Oc35862	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Oc35862	NCP	%	100			70-130	Pass	
TRH C6-C10	M20-Oc35862	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Oc27308	NCP	%	88			75-125	Pass	
Cadmium	M20-Oc27308	NCP	%	89			75-125	Pass	
Chromium	M20-Oc27308	NCP	%	90			75-125	Pass	
Copper	M20-Oc27308	NCP	%	93			75-125	Pass	
Lead	M20-Oc27308	NCP	%	88			75-125	Pass	
Mercury	M20-Oc27308	NCP	%	89			75-125	Pass	
Nickel	M20-Oc27308	NCP	%	92			75-125	Pass	
Zinc	M20-Oc27308	NCP	%	92			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Oc27308	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M20-Oc27308	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Oc27308	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M20-Oc27308	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M20-Oc27308	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M20-Oc27308	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M20-Oc27308	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M20-Oc27308	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

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

Authorised By

Andrew Black	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Vivian Wang	Senior Analyst-Volatile (VIC)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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eurofins | Environment Testing

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
Sydney
NSW 2000

Project Name: KAMAY WHARF PROJECT
Project ID: 0564417

Order No.:
Report #: 754409
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 3, 2020 6:00 PM
Due: Nov 4, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X		X
Brisbane Laboratory - NATA Site # 20794								X	
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	TP06_0.4	Nov 03, 2020		Soil	S20-No03982	X			
2	TP06_0.4_ACM	Nov 03, 2020		Building Materials	S20-No03983		X		
3	TP05_0.15	Nov 03, 2020		Soil	S20-No03984	X			
4	TP05_PACM	Nov 03, 2020		Building Materials	S20-No03985		X		
5	TP14_0.2	Nov 03, 2020		Soil	S20-No03986			X	
6	TP06_0.2	Nov 03, 2020		Soil	S20-No03987			X	
7	TP21_0.1	Nov 03, 2020		Soil	S20-No03988			X	
8	TP20_0.2	Nov 03, 2020		Soil	S20-No03989			X	

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

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Brisbane
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NATA # 1261 Site # 20794

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Site # 23736

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Company Name: ERM Sydney
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Project Name: KAMAY WHARF PROJECT
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Received: Nov 3, 2020 6:00 PM
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Contact Name: Ian Batterley

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Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X		X
Brisbane Laboratory - NATA Site # 20794								X	
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
9	QC501_20201103	Nov 03, 2020		Water	S20-No03990			X	
10	QC301_20201103 (TB)	Nov 03, 2020		Water	S20-No03991				X
11	QC401_20201103 (TS)	Nov 03, 2020		Water	S20-No03992				X
Test Counts						2	2	7	7

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	754409-AID
Project Name	KAMAY WHARF PROJECT
Project ID	0564417
Received Date	Nov 03, 2020
Date Reported	Nov 04, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name KAMAY WHARF PROJECT
Project ID 0564417
Date Sampled Nov 03, 2020
Report 754409-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP06_0.4	20-No03982	Nov 03, 2020	Approximate Sample 855g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP06_0.4_ACM	20-No03983	Nov 03, 2020	Approximate Sample 20g / 60x35x5mm Sample consisted of: Grey compressed fibre cement	Chrysotile asbestos detected.
TP05_0.15	20-No03984	Nov 03, 2020	Approximate Sample 611g Sample consisted of: Brown fine-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP05_PACM	20-No03985	Nov 03, 2020	Approximate Sample 24g / 40x30x5mm Sample consisted of: Grey compressed fibre cement	Chrysotile asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 04, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 04, 2020	Indefinite

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IANZ # 1290

Company Name:	ERM Sydney	**Order No.:**	**Received:** Nov 3, 2020 6:00 PM
Address:	Level 15, 309 Kent St Sydney NSW 2000	**Report #:** 754409 **Phone:** 02 8584 8888 **Fax:** 02 8584 8800	**Due:** Nov 4, 2020 **Priority:** 1 Day **Contact Name:** Ian Batterley
Project Name:	KAMAY WHARF PROJECT		
Project ID:	0564417		

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X		X
Brisbane Laboratory - NATA Site # 20794								X	
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	TP06_0.4	Nov 03, 2020		Soil	S20-No03982	X			
2	TP06_0.4_ACM	Nov 03, 2020		Building Materials	S20-No03983		X		
3	TP05_0.15	Nov 03, 2020		Soil	S20-No03984	X			
4	TP05_PACM	Nov 03, 2020		Building Materials	S20-No03985		X		
5	TP14_0.2	Nov 03, 2020		Soil	S20-No03986			X	
6	TP06_0.2	Nov 03, 2020		Soil	S20-No03987			X	
7	TP21_0.1	Nov 03, 2020		Soil	S20-No03988			X	
8	TP20_0.2	Nov 03, 2020		Soil	S20-No03989			X	

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
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NSW 2000

Project Name: KAMAY WHARF PROJECT
Project ID: 0564417

Order No.:
Report #: 754409
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 3, 2020 6:00 PM
Due: Nov 4, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X		X
Brisbane Laboratory - NATA Site # 20794								X	
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory									
External Laboratory									
9	QC501_20201103	Nov 03, 2020		Water	S20-No03990			X	
10	QC301_20201103 (TB)	Nov 03, 2020		Water	S20-No03991				X
11	QC401_20201103 (TS)	Nov 03, 2020		Water	S20-No03992				X
Test Counts						2	2	7	7

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
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NSW 2000

Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 6, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP02_0.3	Nov 02, 2020		Soil	S20-No06853	X				X	X	X		X	X
2	TP02_0.6	Nov 02, 2020		Soil	S20-No06854			X							
3	TP02_1.1	Nov 02, 2020		Soil	S20-No06855	X				X	X	X		X	X
4	TP03_0.1	Nov 02, 2020		Soil	S20-No06856	X				X	X	X		X	X
5	QC101_20201102	Nov 02, 2020		Soil	S20-No06857	X				X	X	X		X	X
6	TP03_0.6	Nov 02, 2020		Soil	S20-No06858	X				X	X	X		X	X
7	TP03_0.9	Nov 02, 2020		Soil	S20-No06859			X							
8	TP04_0.1	Nov 02, 2020		Soil	S20-No06860	X				X	X	X		X	X

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Company Name: ERM Sydney
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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 6, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
9	TP04_0.2	Nov 02, 2020		Soil	S20-No06861	X									
10	QC301_20201102	Nov 02, 2020		Water	S20-No06862								X		
11	QC401_20201102	Nov 02, 2020		Water	S20-No06863				X						
12	QC501_20201102	Nov 02, 2020		Water	S20-No06864					X		X		X	X
13	TP02_0.3 (ASSph BAG)	Nov 02, 2020		Soil	S20-No06865			X							
14	TP04_0.2_acm	Nov 02, 2020		Building Materials	S20-No06866		X								
Test Counts						7	1	3	1	7	6	7	1	7	7

Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	754811-AID
Project Name	KAMAY WHARF PROJECT
Project ID	564417
Received Date	Nov 05, 2020
Date Reported	Nov 12, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
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Project Name KAMAY WHARF PROJECT
Project ID 564417
Date Sampled Nov 02, 2020
Report 754811-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP02_0.3	20-No06853	Nov 02, 2020	Approximate Sample 837g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP02_1.1	20-No06855	Nov 02, 2020	Approximate Sample 801g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP03_0.1	20-No06856	Nov 02, 2020	Approximate Sample 775g Sample consisted of: Brown fine-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC101_20201102	20-No06857	Nov 02, 2020	Approximate Sample 751g Sample consisted of: Brown fine-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP03_0.6	20-No06858	Nov 02, 2020	Approximate Sample 944g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04_0.1	20-No06860	Nov 02, 2020	Approximate Sample 748g Sample consisted of: Brown fine-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04_0.2	20-No06861	Nov 02, 2020	Approximate Sample 839g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04_0.2_acm	20-No06866	Nov 02, 2020	Approximate Sample 17g / 60x50x5mm Sample consisted of: Grey compressed fibre cement fragment	Chrysotile asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2020	Indefinite

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP02_0.3	Nov 02, 2020		Soil	S20-No06853	X				X	X	X		X	X
2	TP02_0.6	Nov 02, 2020		Soil	S20-No06854			X							
3	TP02_1.1	Nov 02, 2020		Soil	S20-No06855	X				X	X	X		X	X
4	TP03_0.1	Nov 02, 2020		Soil	S20-No06856	X				X	X	X		X	X
5	QC101_20201102	Nov 02, 2020		Soil	S20-No06857	X				X	X	X		X	X
6	TP03_0.6	Nov 02, 2020		Soil	S20-No06858	X				X	X	X		X	X
7	TP03_0.9	Nov 02, 2020		Soil	S20-No06859			X							
8	TP04_0.1	Nov 02, 2020		Soil	S20-No06860	X				X	X	X		X	X

eurofins | Environment Testing

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Company Name: ERM Sydney
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NSW 2000

Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
9	TP04_0.2	Nov 02, 2020		Soil	S20-No06861	X									
10	QC301_20201102	Nov 02, 2020		Water	S20-No06862								X		
11	QC401_20201102	Nov 02, 2020		Water	S20-No06863				X						
12	QC501_20201102	Nov 02, 2020		Water	S20-No06864					X		X		X	X
13	TP02_0.3 (ASSph BAG)	Nov 02, 2020		Soil	S20-No06865			X							
14	TP04_0.2_acm	Nov 02, 2020		Building Materials	S20-No06866		X								
Test Counts						7	1	3	1	7	6	7	1	7	7

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
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Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **754811-S**
Project name KAMAY WHARF PROJECT
Project ID 564417
Received Date Nov 05, 2020

Client Sample ID			**TP02_0.3**	**TP02_1.1**	**TP03_0.1**	**QC101_20201102**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No06853**	**S20-No06855**	**S20-No06856**	**S20-No06857**
Date Sampled			**Nov 02, 2020**	**Nov 02, 2020**	**Nov 02, 2020**	**Nov 02, 2020**
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	63
TRH C29-C36	50	mg/kg	< 50	< 50	53	60
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	53	123
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	73	72	76
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	92	73	72	76
Toluene-d8 (surr.)	1	%	93	102	93	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	102	90	101	103
p-Terphenyl-d14 (surr.)	1	%	117	105	111	121
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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	91	111	84	91
Tetrachloro-m-xylene (surr.)	1	%	117	98	118	113

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
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
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	%	85	96	92	95
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	100	98	91	98
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	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
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	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
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	100	98	91	98
Nitrobenzene-d5 (surr.)	1	%	106	98	103	103
2-Fluorobiphenyl (surr.)	1	%	102	90	101	103
2.4.6-Tribromophenol (surr.)	1	%	62	64	56	56
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	9.7	< 5	14	10
Lead	5	mg/kg	6.5	14	25	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	15	< 5	33	38
% Moisture	1	%	4.9	7.0	7.3	7.7
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	%	114	128	111	115
13C5-PFPeA (surr.)	1	%	136	116	117	159
13C5-PFHxA (surr.)	1	%	122	141	151	118

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	129	116	118	136
13C8-PFOA (surr.)	1	%	135	128	126	128
13C5-PFNA (surr.)	1	%	125	124	128	134
13C6-PFDA (surr.)	1	%	135	126	124	131
13C2-PFUnDA (surr.)	1	%	122	122	120	113
13C2-PFDoDA (surr.)	1	%	134	131	141	117
13C2-PFTeDA (surr.)	1	%	91	85	68	70
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	%	107	106	55	53
D3-N-MeFOSA (surr.)	1	%	75	76	57	47
D5-N-EtFOSA (surr.)	1	%	92	100	70	64
D7-N-MeFOSE (surr.)	1	%	93	112	84	82
D9-N-EtFOSE (surr.)	1	%	109	111	66	70
D5-N-EtFOSAA (surr.)	1	%	89	91	95	98
D3-N-MeFOSAA (surr.)	1	%	108	102	85	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	%	117	120	108	118
18O2-PFHxS (surr.)	1	%	113	124	128	127
13C8-PFOS (surr.)	1	%	111	125	117	120
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	%	96	80	122	157
13C2-6:2 FTSA (surr.)	1	%	97	87	135	132
13C2-8:2 FTSA (surr.)	1	%	83	88	118	134
13C2-10:2 FTSA (surr.)	1	%	103	127	111	105

Client Sample ID			TP02_0.3	TP02_1.1	TP03_0.1	QC101_20201102
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No06853	S20-No06855	S20-No06856	S20-No06857
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit				
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			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
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	25
TRH C15-C28	50	mg/kg	< 50	91
TRH C29-C36	50	mg/kg	< 50	89
TRH C10-C36 (Total)	50	mg/kg	< 50	205
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	%	88	87
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit		
Volatile Organics				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	88	87
Toluene-d8 (surr.)	1	%	101	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	140
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	140

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
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	%	112	109
p-Terphenyl-d14 (surr.)	1	%	136	127
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-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1
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	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	125	119
Tetrachloro-m-xylene (surr.)	1	%	126	122

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
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	%	117	105
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit		
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20
Phenol-d6 (surr.)	1	%	116	96
Semivolatile Organics				
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit		
Semivolatile Organics				
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit		
Semivolatile Organics				
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	116	96
Nitrobenzene-d5 (surr.)	1	%	129	106
2-Fluorobiphenyl (surr.)	1	%	112	109
2.4.6-Tribromophenol (surr.)	1	%	90	62
Heavy Metals				
Arsenic	2	mg/kg	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	6.5
Copper	5	mg/kg	< 5	13
Lead	5	mg/kg	< 5	29
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	5.9
Zinc	5	mg/kg	< 5	49
% Moisture	1	%	4.4	6.7
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
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	%	121	112
13C5-PFPeA (surr.)	1	%	124	110
13C5-PFHxA (surr.)	1	%	138	123

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No06858	S20-No06860
Date Sampled			Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C4-PFHpA (surr.)	1	%	126	125
13C8-PFOA (surr.)	1	%	130	137
13C5-PFNA (surr.)	1	%	134	130
13C6-PFDA (surr.)	1	%	137	111
13C2-PFUnDA (surr.)	1	%	135	112
13C2-PFDoDA (surr.)	1	%	135	112
13C2-PFTeDA (surr.)	1	%	97	46
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	%	100	55
D3-N-MeFOSA (surr.)	1	%	75	37
D5-N-EtFOSA (surr.)	1	%	99	50
D7-N-MeFOSE (surr.)	1	%	120	53
D9-N-EtFOSE (surr.)	1	%	119	52
D5-N-EtFOSAA (surr.)	1	%	102	73
D3-N-MeFOSAA (surr.)	1	%	116	74
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	%	124	108
18O2-PFHxS (surr.)	1	%	133	113
13C8-PFOS (surr.)	1	%	118	116
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	%	86	148
13C2-6:2 FTSA (surr.)	1	%	92	168
13C2-8:2 FTSA (surr.)	1	%	111	131
13C2-10:2 FTSA (surr.)	1	%	138	109

Client Sample ID			TP03_0.6	TP04_0.1
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S20-No06858**	**S20-No06860**
Date Sampled			**Nov 02, 2020**	**Nov 02, 2020**
Test/Reference	LOR	Unit		
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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 06, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 06, 2020	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Organochlorine Pesticides	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
% Moisture	Sydney	Nov 06, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 06, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 06, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 06, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 6, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP02_0.3	Nov 02, 2020		Soil	S20-No06853	X				X	X	X		X	X
2	TP02_0.6	Nov 02, 2020		Soil	S20-No06854			X							
3	TP02_1.1	Nov 02, 2020		Soil	S20-No06855	X				X	X	X		X	X
4	TP03_0.1	Nov 02, 2020		Soil	S20-No06856	X				X	X	X		X	X
5	QC101_20201102	Nov 02, 2020		Soil	S20-No06857	X				X	X	X		X	X
6	TP03_0.6	Nov 02, 2020		Soil	S20-No06858	X				X	X	X		X	X
7	TP03_0.9	Nov 02, 2020		Soil	S20-No06859			X							
8	TP04_0.1	Nov 02, 2020		Soil	S20-No06860	X				X	X	X		X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
9	TP04_0.2	Nov 02, 2020		Soil	S20-No06861	X									
10	QC301_20201102	Nov 02, 2020		Water	S20-No06862								X		
11	QC401_20201102	Nov 02, 2020		Water	S20-No06863				X						
12	QC501_20201102	Nov 02, 2020		Water	S20-No06864					X		X		X	X
13	TP02_0.3 (ASSph BAG)	Nov 02, 2020		Soil	S20-No06865			X							
14	TP04_0.2_acm	Nov 02, 2020		Building Materials	S20-No06866		X								
Test Counts						7	1	3	1	7	6	7	1	7	7

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No06858	CP	%	119			75-125	Pass	
Cadmium	S20-No06858	CP	%	123			75-125	Pass	
Chromium	S20-No06858	CP	%	125			75-125	Pass	
Copper	S20-No06858	CP	%	122			75-125	Pass	
Nickel	S20-No06858	CP	%	124			75-125	Pass	
Zinc	S20-No06858	CP	%	117			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No03734	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	B20-Oc41475	NCP	mg/kg	22	23	5.0	30%	Pass	
TRH C15-C28	B20-Oc41475	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B20-Oc41475	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Toluene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Ethylbenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
m&p-Xylenes	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
o-Xylene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Xylenes - Total*	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.1-Dichloroethene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.1.1-Trichloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.1.2-Trichloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2-Dibromoethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2-Dichlorobenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2-Dichloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2-Dichloropropane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2.3-Trichloropropane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.3-Dichlorobenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.3-Dichloropropane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
1.4-Dichlorobenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
2-Butanone (MEK)	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
2-Propanone (Acetone)	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
4-Chlorotoluene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Allyl chloride	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Bromobenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Bromochloromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Bromodichloromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Bromoform	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Bromomethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Carbon disulfide	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Carbon Tetrachloride	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Chlorobenzene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Chloroethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Chloroform	S20-Oc46003	NCP	mg/kg	**	**	3.0	30%	Pass	
Chloromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Dibromochloromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Dibromomethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Dichlorodifluoromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Iodomethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Methylene Chloride	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Styrene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Tetrachloroethene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Trichloroethene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Trichlorofluoromethane	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Vinyl chloride	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
TRH C6-C10	S20-Oc46003	NCP	mg/kg	**	**	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No08579	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No08579	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan I	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No08579	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No08579	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Bolstar	S20-No08579	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No08579	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-S	S20-No08579	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No08579	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-No06926	NCP	%	7.0	7.5	6.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No06853	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No06853	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No06853	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)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No06853	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No06853	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No06856	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S20-No06856	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No06856	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S20-No06856	CP	mg/kg	14	8.7	48	30%	Fail	Q15
Lead	S20-No06856	CP	mg/kg	25	22	16	30%	Pass	
Mercury	S20-No06856	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No06856	CP	mg/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
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **754811-W**
Project name KAMAY WHARF PROJECT
Project ID 564417
Received Date Nov 05, 2020

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No06862**	**S20-No06863**	**S20-No06864**
Date Sampled			**Nov 02, 2020**	**Nov 02, 2020**	**Nov 02, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	0.8
TRH >C34-C40	0.1	mg/L	-	-	0.3
TRH >C10-C40 (total)*	0.1	mg/L	-	-	1.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	0.3
TRH C29-C36	0.1	mg/L	-	-	0.5
TRH C10-C36 (Total)	0.1	mg/L	-	-	0.8
BTEX					
Benzene	0.001	mg/L	< 0.001	110	< 0.001
Toluene	0.001	mg/L	< 0.001	100	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	100	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	110	< 0.002
o-Xylene	0.001	mg/L	< 0.001	110	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	110	< 0.003
4-Bromofluorobenzene (surr.)	1	%	116	110	137
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1.3-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
2-Butanone (MEK)	0.001	mg/L	-	-	< 0.001
2-Propanone (Acetone)	0.001	mg/L	-	-	< 0.001
4-Chlorotoluene	0.001	mg/L	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	-	-	< 0.001
Allyl chloride	0.001	mg/L	-	-	< 0.001
Benzene	0.001	mg/L	-	-	< 0.001
Bromobenzene	0.001	mg/L	-	-	< 0.001
Bromochloromethane	0.001	mg/L	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	-	-	< 0.001
Bromoform	0.001	mg/L	-	-	< 0.001
Bromomethane	0.001	mg/L	-	-	< 0.001
Carbon disulfide	0.001	mg/L	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	-	-	< 0.001
Chlorobenzene	0.001	mg/L	-	-	< 0.001
Chloroethane	0.001	mg/L	-	-	< 0.001
Chloroform	0.005	mg/L	-	-	< 0.005
Chloromethane	0.001	mg/L	-	-	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	-	-	< 0.001
Dibromomethane	0.001	mg/L	-	-	< 0.001
Dichlorodifluoromethane	0.001	mg/L	-	-	< 0.001
Ethylbenzene	0.001	mg/L	-	-	< 0.001
Iodomethane	0.001	mg/L	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	-	< 0.002
Methylene Chloride	0.001	mg/L	-	-	< 0.001
o-Xylene	0.001	mg/L	-	-	< 0.001
Styrene	0.001	mg/L	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	-	-	< 0.001
Toluene	0.001	mg/L	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001
Trichloroethene	0.001	mg/L	-	-	< 0.001
Trichlorofluoromethane	0.001	mg/L	-	-	< 0.001
Vinyl chloride	0.001	mg/L	-	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	-	< 0.003
Total MAH*	0.003	mg/L	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	-	-	137
Toluene-d8 (surr.)	1	%	-	-	66

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	69
p-Terphenyl-d14 (surr.)	1	%	-	-	80
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0001	mg/L	-	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.001	mg/L	-	-	< 0.001
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	114
Tetrachloro-m-xylene (surr.)	1	%	-	-	136

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.02	mg/L	-	-	< 0.02
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.002	mg/L	-	-	< 0.002
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	82
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	46
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
1-Chloronaphthalene	0.005	mg/L	-	-	< 0.005
1-Naphthylamine	0.002	mg/L	-	-	< 0.002
1.2-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.3-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.4-Trichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.4.5-Tetrachlorobenzene	0.002	mg/L	-	-	< 0.002
1.3-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.3.5-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.4-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
2-Chloronaphthalene	0.002	mg/L	-	-	< 0.002
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2-Methylnaphthalene	0.002	mg/L	-	-	< 0.002
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Naphthylamine	0.002	mg/L	-	-	< 0.002
2-Nitroaniline	0.004	mg/L	-	-	< 0.004
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2-Picoline	0.005	mg/L	-	-	< 0.005
2.3.4.6-Tetrachlorophenol	0.002	mg/L	-	-	< 0.002
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	-	-	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.6-Dinitrotoluene	0.004	mg/L	-	-	< 0.004
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006
3-Methylcholanthrene	0.002	mg/L	-	-	< 0.002
3.3'-Dichlorobenzidine	0.005	mg/L	-	-	< 0.005
4-Aminobiphenyl	0.002	mg/L	-	-	< 0.002
4-Bromophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
4-Chlorophenyl phenyl ether	0.002	mg/L	-	-	< 0.002

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
4.4'-DDD	0.002	mg/L	-	-	< 0.002
4.4'-DDE	0.002	mg/L	-	-	< 0.002
4.4'-DDT	0.004	mg/L	-	-	< 0.004
7.12-Dimethylbenz(a)anthracene	0.002	mg/L	-	-	< 0.002
a-BHC	0.002	mg/L	-	-	< 0.002
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Acetophenone	0.002	mg/L	-	-	< 0.002
Aldrin	0.002	mg/L	-	-	< 0.002
Aniline	0.002	mg/L	-	-	< 0.002
Anthracene	0.001	mg/L	-	-	< 0.001
b-BHC	0.002	mg/L	-	-	< 0.002
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Benzyl chloride	0.005	mg/L	-	-	< 0.005
Bis(2-chloroethoxy)methane	0.002	mg/L	-	-	< 0.002
Bis(2-chloroisopropyl)ether	0.002	mg/L	-	-	< 0.002
Bis(2-ethylhexyl)phthalate	0.02	mg/L	-	-	< 0.02
Butyl benzyl phthalate	0.002	mg/L	-	-	< 0.002
Chrysene	0.001	mg/L	-	-	< 0.001
d-BHC	0.002	mg/L	-	-	< 0.002
Di-n-butyl phthalate	0.002	mg/L	-	-	< 0.005
Di-n-octyl phthalate	0.002	mg/L	-	-	< 0.002
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	-	-	< 0.005
Dibenzofuran	0.002	mg/L	-	-	< 0.002
Dieldrin	0.002	mg/L	-	-	< 0.002
Diethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethylaminoazobenzene	0.002	mg/L	-	-	< 0.002
Diphenylamine	0.002	mg/L	-	-	< 0.002
Endosulfan I	0.002	mg/L	-	-	< 0.002
Endosulfan II	0.002	mg/L	-	-	< 0.002
Endosulfan sulphate	0.002	mg/L	-	-	< 0.002
Endrin	0.002	mg/L	-	-	< 0.002
Endrin aldehyde	0.002	mg/L	-	-	< 0.002
Endrin ketone	0.002	mg/L	-	-	< 0.002
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
g-BHC (Lindane)	0.002	mg/L	-	-	< 0.002
Heptachlor	0.002	mg/L	-	-	< 0.002
Heptachlor epoxide	0.002	mg/L	-	-	< 0.002
Hexachlorobenzene	0.002	mg/L	-	-	< 0.002
Hexachlorobutadiene	0.002	mg/L	-	-	< 0.002
Hexachlorocyclopentadiene	0.004	mg/L	-	-	< 0.004

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
Hexachloroethane	0.002	mg/L	-	-	< 0.002
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Methoxychlor	0.005	mg/L	-	-	< 0.005
N-Nitrosodibutylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosodipropylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosopiperidine	0.002	mg/L	-	-	< 0.002
Naphthalene	0.001	mg/L	-	-	< 0.001
Nitrobenzene	0.005	mg/L	-	-	< 0.005
Pentachlorobenzene	0.002	mg/L	-	-	< 0.002
Pentachloronitrobenzene	0.002	mg/L	-	-	< 0.002
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Phenanthrene	0.001	mg/L	-	-	< 0.001
Phenol	0.003	mg/L	-	-	< 0.003
Pronamide	0.005	mg/L	-	-	< 0.005
Pyrene	0.001	mg/L	-	-	< 0.001
Trifluralin	0.005	mg/L	-	-	< 0.005
Phenol-d6 (surr.)	1	%	-	-	46
Nitrobenzene-d5 (surr.)	1	%	-	-	INT
2-Fluorobiphenyl (surr.)	1	%	-	-	69
2.4.6-Tribromophenol (surr.)	1	%	-	-	INT
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	-	-	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	-	-	< 0.01
13C4-PFBA (surr.)	1	%	-	-	150
13C5-PFPeA (surr.)	1	%	-	-	121
13C5-PFHxA (surr.)	1	%	-	-	117
13C4-PFHpA (surr.)	1	%	-	-	113
13C8-PFOA (surr.)	1	%	-	-	99
13C5-PFNA (surr.)	1	%	-	-	127
13C6-PFDA (surr.)	1	%	-	-	97
13C2-PFUnDA (surr.)	1	%	-	-	92

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No06862	S20-No06863	S20-No06864
Date Sampled			Nov 02, 2020	Nov 02, 2020	Nov 02, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C2-PFDoDA (surr.)	1	%	-	-	85
13C2-PFTeDA (surr.)	1	%	-	-	71
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	-	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
13C8-FOSA (surr.)	1	%	-	-	56
D3-N-MeFOSA (surr.)	1	%	-	-	51
D5-N-EtFOSA (surr.)	1	%	-	-	43
D7-N-MeFOSE (surr.)	1	%	-	-	52
D9-N-EtFOSE (surr.)	1	%	-	-	64
D5-N-EtFOSAA (surr.)	1	%	-	-	13
D3-N-MeFOSAA (surr.)	1	%	-	-	12
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	-	-	< 0.01
13C3-PFBS (surr.)	1	%	-	-	117
18O2-PFHxS (surr.)	1	%	-	-	102
13C8-PFOS (surr.)	1	%	-	-	104
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	-	-	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	-	56
13C2-6:2 FTSA (surr.)	1	%	-	-	43
13C2-8:2 FTSA (surr.)	1	%	-	-	44
13C2-10:2 FTSA (surr.)	1	%	-	-	52

Client Sample ID			QC301_20201102	QC401_20201102	QC501_20201102
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No06862**	**S20-No06863**	**S20-No06864**
Date Sampled			**Nov 02, 2020**	**Nov 02, 2020**	**Nov 02, 2020**
Test/Reference	LOR	Unit			
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	-	-	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	-	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	-	-	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 06, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 06, 2020	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Organochlorine Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 754811
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 1:00 PM
Due: Nov 6, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD	BTEX	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**										
1	TP02_0.3	Nov 02, 2020		Soil	S20-No06853	X				X	X	X		X	X
2	TP02_0.6	Nov 02, 2020		Soil	S20-No06854			X							
3	TP02_1.1	Nov 02, 2020		Soil	S20-No06855	X				X	X	X		X	X
4	TP03_0.1	Nov 02, 2020		Soil	S20-No06856	X				X	X	X		X	X
5	QC101_20201102	Nov 02, 2020		Soil	S20-No06857	X				X	X	X		X	X
6	TP03_0.6	Nov 02, 2020		Soil	S20-No06858	X				X	X	X		X	X
7	TP03_0.9	Nov 02, 2020		Soil	S20-No06859			X							
8	TP04_0.1	Nov 02, 2020		Soil	S20-No06860	X				X	X	X		X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271															
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794															X
Perth Laboratory - NATA Site # 23736															
Mayfield Laboratory															
External Laboratory															
9	TP04_0.2	Nov 02, 2020		Soil	S20-No06861	X									
10	QC301_20201102	Nov 02, 2020		Water	S20-No06862								X		
11	QC401_20201102	Nov 02, 2020		Water	S20-No06863				X						
12	QC501_20201102	Nov 02, 2020		Water	S20-No06864					X		X		X	X
13	TP02_0.3 (ASSph BAG)	Nov 02, 2020		Soil	S20-No06865			X							
14	TP04_0.2_acm	Nov 02, 2020		Building Materials	S20-No06866		X								
Test Counts						7	1	3	1	7	6	7	1	7	7

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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 - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.002			0.002	Pass	
1.2-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
2-Chloronaphthalene	mg/L	< 0.002			0.002	Pass	
2-Methylnaphthalene	mg/L	< 0.002			0.002	Pass	
2-Naphthylamine	mg/L	< 0.002			0.002	Pass	
2-Nitroaniline	mg/L	< 0.004			0.004	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.004			0.004	Pass	
3-Methylcholanthrene	mg/L	< 0.002			0.002	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.002			0.002	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.002			0.002	Pass	
4.4'-DDE	mg/L	< 0.002			0.002	Pass	
4.4'-DDT	mg/L	< 0.004			0.004	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.002			0.002	Pass	
Acetophenone	mg/L	< 0.002			0.002	Pass	
Aldrin	mg/L	< 0.002			0.002	Pass	
Aniline	mg/L	< 0.002			0.002	Pass	
b-BHC	mg/L	< 0.002			0.002	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.002			0.002	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.002			0.002	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.02			0.02	Pass	
Butyl benzyl phthalate	mg/L	< 0.002			0.002	Pass	
d-BHC	mg/L	< 0.002			0.002	Pass	
Di-n-butyl phthalate	mg/L	< 0.002			0.002	Pass	
Di-n-octyl phthalate	mg/L	< 0.002			0.002	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.002			0.002	Pass	
Dieldrin	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Diethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethylaminoazobenzene	mg/L	< 0.002			0.002	Pass	
Diphenylamine	mg/L	< 0.002			0.002	Pass	
Endosulfan I	mg/L	< 0.002			0.002	Pass	
Endosulfan II	mg/L	< 0.002			0.002	Pass	
Endosulfan sulphate	mg/L	< 0.002			0.002	Pass	
Endrin	mg/L	< 0.002			0.002	Pass	
Endrin aldehyde	mg/L	< 0.002			0.002	Pass	
Endrin ketone	mg/L	< 0.002			0.002	Pass	
g-BHC (Lindane)	mg/L	< 0.002			0.002	Pass	
Heptachlor	mg/L	< 0.002			0.002	Pass	
Heptachlor epoxide	mg/L	< 0.002			0.002	Pass	
Hexachlorobenzene	mg/L	< 0.002			0.002	Pass	
Hexachlorobutadiene	mg/L	< 0.002			0.002	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.004			0.004	Pass	
Hexachloroethane	mg/L	< 0.002			0.002	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosodipropylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosopiperidine	mg/L	< 0.002			0.002	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.002			0.002	Pass	
Pentachloronitrobenzene	mg/L	< 0.002			0.002	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	102			70-130	Pass	
TRH C6-C10	%	113			70-130	Pass	
TRH >C10-C16	%	82			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	113			70-130	Pass	
TRH C10-C14	%	84			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	110			70-130	Pass	
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	98			70-130	Pass	
1.2-Dichlorobenzene	%	102			70-130	Pass	
1.2-Dichloroethane	%	112			70-130	Pass	
Trichloroethene	%	97			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	90			70-130	Pass	
Acenaphthylene	%	111			70-130	Pass	
Anthracene	%	72			70-130	Pass	
Benz(a)anthracene	%	111			70-130	Pass	
Benzo(a)pyrene	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	%	91			70-130	Pass	
Benzo(g.h.i)perylene	%	94			70-130	Pass	
Benzo(k)fluoranthene	%	127			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene	%	113			70-130	Pass	
Dibenz(a.h)anthracene	%	91			70-130	Pass	
Fluoranthene	%	88			70-130	Pass	
Fluorene	%	125			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	88			70-130	Pass	
Naphthalene	%	111			70-130	Pass	
Phenanthrene	%	72			70-130	Pass	
Pyrene	%	83			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	86			70-130	Pass	
4.4'-DDE	%	83			70-130	Pass	
4.4'-DDT	%	76			70-130	Pass	
Aldrin	%	76			70-130	Pass	
Dieldrin	%	75			70-130	Pass	
Endosulfan I	%	74			70-130	Pass	
Endosulfan II	%	73			70-130	Pass	
Endosulfan sulphate	%	78			70-130	Pass	
Endrin	%	109			70-130	Pass	
Endrin aldehyde	%	70			70-130	Pass	
Heptachlor epoxide	%	77			70-130	Pass	
Hexachlorobenzene	%	77			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	73			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Fenitrothion	%	79			70-130	Pass	
Methyl parathion	%	78			70-130	Pass	
Mevinphos	%	82			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	65			30-130	Pass	
2.4-Dichlorophenol	%	59			30-130	Pass	
2.4.5-Trichlorophenol	%	128			30-130	Pass	
2.4.6-Trichlorophenol	%	130			30-130	Pass	
2.6-Dichlorophenol	%	65			30-130	Pass	
4-Chloro-3-methylphenol	%	121			30-130	Pass	
Pentachlorophenol	%	126			30-130	Pass	
Tetrachlorophenols - Total	%	56			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	80			30-130	Pass	
2-Methylphenol (o-Cresol)	%	57			30-130	Pass	
2-Nitrophenol	%	84			30-130	Pass	
2.4-Dimethylphenol	%	60			30-130	Pass	
2.4-Dinitrophenol	%	98			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	112			30-130	Pass	
4-Nitrophenol	%	104			30-130	Pass	
Dinoseb	%	68			30-130	Pass	
Phenol	%	39			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	80			70-130	Pass	
1.3.5-Trichlorobenzene	%	79			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.4-Dichlorobenzene	%	72			70-130	Pass	
2.4-Dinitrotoluene	%	104			70-130	Pass	
N-Nitrosodipropylamine	%	96			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	95			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	93			80-120	Pass	
Lead	%	94			80-120	Pass	
Mercury	%	106			80-120	Pass	
Nickel	%	96			80-120	Pass	
Zinc	%	95			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	90			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	92			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	92			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	105			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	110			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	62			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	107			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	116			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	93			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	113			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	108			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	100			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	101			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	98			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	96			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	103			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	87			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	101			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	100			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	114			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	106			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No08145	NCP	%	129			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-No07126	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No10980	NCP	%	83			70-130	Pass	
Acenaphthylene	S20-No10980	NCP	%	80			70-130	Pass	
Anthracene	S20-No10980	NCP	%	113			70-130	Pass	
Benz(a)anthracene	S20-No10980	NCP	%	98			70-130	Pass	
Benzo(a)pyrene	S20-No10980	NCP	%	92			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No10980	NCP	%	89			70-130	Pass	
Benzo(g.h.i)perylene	S20-No10980	NCP	%	90			70-130	Pass	
Benzo(k)fluoranthene	S20-No10980	NCP	%	98			70-130	Pass	
Chrysene	S20-No10980	NCP	%	99			70-130	Pass	
Dibenz(a.h)anthracene	S20-No10980	NCP	%	94			70-130	Pass	
Fluorene	S20-No10980	NCP	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No10980	NCP	%	83			70-130	Pass	
Naphthalene	S20-No10980	NCP	%	74			70-130	Pass	
Phenanthrene	S20-No10980	NCP	%	112			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No10980	NCP	%	67			30-130	Pass	
2.4-Dichlorophenol	S20-No10980	NCP	%	72			30-130	Pass	
2.4.5-Trichlorophenol	S20-No10980	NCP	%	88			30-130	Pass	
2.4.6-Trichlorophenol	S20-No10980	NCP	%	84			30-130	Pass	
2.6-Dichlorophenol	S20-No10980	NCP	%	80			30-130	Pass	
4-Chloro-3-methylphenol	S20-No10980	NCP	%	60			30-130	Pass	
Pentachlorophenol	S20-No10980	NCP	%	90			30-130	Pass	
Tetrachlorophenols - Total	S20-No10980	NCP	%	74			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S20-No10980	NCP	%	109			30-130	Pass	
2-Methylphenol (o-Cresol)	S20-No10980	NCP	%	42			30-130	Pass	
2-Nitrophenol	S20-No10980	NCP	%	78			30-130	Pass	
2.4-Dimethylphenol	S20-No10980	NCP	%	39			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No10980	NCP	%	42			30-130	Pass	
Dinoseb	S20-No10980	NCP	%	84			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No04783	NCP	%	97			75-125	Pass	
Cadmium	S20-No04783	NCP	%	100			75-125	Pass	
Chromium	S20-No04783	NCP	%	100			75-125	Pass	
Copper	S20-No04783	NCP	%	96			75-125	Pass	
Lead	S20-No04783	NCP	%	99			75-125	Pass	
Mercury	S20-No04783	NCP	%	109			75-125	Pass	
Nickel	S20-No04783	NCP	%	98			75-125	Pass	
Zinc	S20-No04783	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	P20-No05589	NCP	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	P20-No05589	NCP	%	110			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanoic acid (PFHxA)	P20-No05589	NCP	%	83			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	P20-No05589	NCP	%	82			50-150	Pass	
Perfluorooctanoic acid (PFOA)	P20-No05589	NCP	%	83			50-150	Pass	
Perfluorononanoic acid (PFNA)	P20-No05589	NCP	%	93			50-150	Pass	
Perfluorodecanoic acid (PFDA)	P20-No05589	NCP	%	84			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	P20-No05589	NCP	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	P20-No05589	NCP	%	103			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	P20-No05589	NCP	%	75			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	P20-No05589	NCP	%	84			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	P20-No05589	NCP	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	P20-No05589	NCP	%	104			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	P20-No05589	NCP	%	78			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	P20-No05589	NCP	%	64			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	P20-No05589	NCP	%	78			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	P20-No05589	NCP	%	108			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	P20-No05589	NCP	%	112			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	P20-No05589	NCP	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	P20-No05589	NCP	%	110			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	P20-No05589	NCP	%	107			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	P20-No05589	NCP	%	87			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	P20-No05589	NCP	%	81			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	P20-No05589	NCP	%	82			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	P20-No05589	NCP	%	101			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	P20-No05589	NCP	%	84			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	P20-No05589	NCP	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	P20-No05589	NCP	%	127			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	P20-No05589	NCP	%	94			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	P20-No05589	NCP	%	117			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-No08154	NCP	mg/L	0.32	0.21	42	30%	Fail	Q15
TRH >C16-C34	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-No08154	NCP	mg/L	0.37	0.30	22	30%	Pass	
TRH C15-C28	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No04916	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-No04916	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-No04916	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-No04916	NCP	mg/L	0.002	0.002	5.0	30%	Pass	
Lead	S20-No04916	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-No04916	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-No04916	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S20-No04916	NCP	mg/L	0.008	0.009	12	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<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)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	P20-No07357	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	P20-No07357	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 755061
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Tristan Rodrigues

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP10_0.1	Nov 04, 2020		Soil	S20-No09029	X				X	X	X		X	X	
2	TP10_1.0	Nov 04, 2020		Soil	S20-No09030				X	X	X	X		X	X	
3	TP14_0.2	Nov 04, 2020		Soil	S20-No09031		X									
4	TP14_0.7	Nov 04, 2020		Soil	S20-No09032				X	X	X	X		X	X	
5	QC101_20201104	Nov 04, 2020		Soil	S20-No09033				X	X	X	X		X	X	
6	BH01_0.1	Nov 04, 2020		Soil	S20-No09034	X				X	X	X		X	X	
7	BH01_0.4	Nov 04, 2020		Soil	S20-No09035			X								
8	BH01_0.8	Nov 04, 2020		Soil	S20-No09036	X				X	X	X		X	X	

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 755061
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Tristan Rodrigues

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
9	BH01_1.1	Nov 04, 2020		Soil	S20-No09037				X	X	X	X		X	X	
10	QC301_20201104 (TB)	Nov 04, 2020		Water	S20-No09038								X			
11	QC401_20201104 (TS)	Nov 04, 2020		Water	S20-No09039											X
12	QC501_20201104	Nov 04, 2020		Water	S20-No09040					X		X		X	X	
Test Counts						3	1	1	4	8	7	8	1	8	8	1

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	755061-AID
Project Name	KAMAY WHARF PROJECT
Project ID	564417
Received Date	Nov 05, 2020
Date Reported	Nov 12, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name KAMAY WHARF PROJECT
Project ID 564417
Date Sampled Nov 04, 2020
Report 755061-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP10_0.1	20-No09029	Nov 04, 2020	Approximate Sample 808g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH01_0.1	20-No09034	Nov 04, 2020	Approximate Sample 763g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH01_0.8	20-No09036	Nov 04, 2020	Approximate Sample 811g Sample consisted of: Brown fine-grained sandy soil, rocks and debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2020	Indefinite

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 755061
Phone: 02 8584 8888
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Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP10_0.1	Nov 04, 2020		Soil	S20-No09029	X				X	X	X		X	X	
2	TP10_1.0	Nov 04, 2020		Soil	S20-No09030				X	X	X	X		X	X	
3	TP14_0.2	Nov 04, 2020		Soil	S20-No09031		X									
4	TP14_0.7	Nov 04, 2020		Soil	S20-No09032				X	X	X	X		X	X	
5	QC101_20201104	Nov 04, 2020		Soil	S20-No09033				X	X	X	X		X	X	
6	BH01_0.1	Nov 04, 2020		Soil	S20-No09034	X				X	X	X		X	X	
7	BH01_0.4	Nov 04, 2020		Soil	S20-No09035			X								
8	BH01_0.8	Nov 04, 2020		Soil	S20-No09036	X				X	X	X		X	X	

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Address: Level 15, 309 Kent St
Sydney
NSW 2000

Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 755061
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
9	BH01_1.1	Nov 04, 2020		Soil	S20-No09037				X	X	X	X		X	X	
10	QC301_20201104 (TB)	Nov 04, 2020		Water	S20-No09038								X			
11	QC401_20201104 (TS)	Nov 04, 2020		Water	S20-No09039											X
12	QC501_20201104	Nov 04, 2020		Water	S20-No09040					X		X		X	X	
Test Counts						3	1	1	4	8	7	8	1	8	8	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **755061-S**
Project name KAMAY WHARF PROJECT
Project ID 564417
Received Date Nov 05, 2020

Client Sample ID			**TP10_0.1**	**TP10_1.0**	**TP14_0.7**	**QC101_20201104**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No09029**	**S20-No09030**	**S20-No09032**	**S20-No09033**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
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	< 50
TRH C29-C36	50	mg/kg	74	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	74	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	84	93	89	93
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	84	93	89	93
Toluene-d8 (surr.)	1	%	94	98	92	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	74	78	83
p-Terphenyl-d14 (surr.)	1	%	101	98	93	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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	99	78	97	86
Tetrachloro-m-xylene (surr.)	1	%	94	92	88	108

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
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
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	%	105	82	84	100
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	81	88	89	88
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 1	< 1	< 1
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	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
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	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
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	81	88	89	88
Nitrobenzene-d5 (surr.)	1	%	97	81	89	83
2-Fluorobiphenyl (surr.)	1	%	85	74	78	83
2.4.6-Tribromophenol (surr.)	1	%	68	58	58	83
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	5.3	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	5.1	< 5
Lead	5	mg/kg	20	< 5	5.7	8.0
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	20	< 5	7.6	11
% Moisture	1	%	7.5	5.0	3.6	3.4
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	%	106	110	109	115
13C5-PFPeA (surr.)	1	%	141	145	130	163
13C5-PFHxA (surr.)	1	%	106	118	131	125

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	113	105	117	121
13C8-PFOA (surr.)	1	%	112	113	117	130
13C5-PFNA (surr.)	1	%	125	125	125	143
13C6-PFDA (surr.)	1	%	102	102	98	115
13C2-PFUnDA (surr.)	1	%	123	137	130	136
13C2-PFDoDA (surr.)	1	%	140	147	138	152
13C2-PFTeDA (surr.)	1	%	123	124	133	160
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	%	104	102	101	117
D3-N-MeFOSA (surr.)	1	%	63	70	73	63
D5-N-EtFOSA (surr.)	1	%	91	95	101	102
D7-N-MeFOSE (surr.)	1	%	115	113	142	138
D9-N-EtFOSE (surr.)	1	%	102	141	120	115
D5-N-EtFOSAA (surr.)	1	%	91	96	91	104
D3-N-MeFOSAA (surr.)	1	%	91	96	97	107
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	%	121	130	154	130
18O2-PFHxS (surr.)	1	%	124	124	130	134
13C8-PFOS (surr.)	1	%	112	125	114	128
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	%	125	106	99	111
13C2-6:2 FTSA (surr.)	1	%	101	97	133	140
13C2-8:2 FTSA (surr.)	1	%	136	126	147	158
13C2-10:2 FTSA (surr.)	1	%	98	102	99	105

Client Sample ID			TP10_0.1	TP10_1.0	TP14_0.7	QC101_20201104
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No09029	S20-No09030	S20-No09032	S20-No09033
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit				
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
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	9.4	9.3	9.2
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	7.8	7.7	7.6
Reaction Ratings*[S05]	-	comment	-	4.0	4.0	4.0

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
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	%	95	85	82
Volatile Organics					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	95	85	82
Toluene-d8 (surr.)	1	%	101	83	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	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

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	0.8	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.1	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.4	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	1.0	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.6	< 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	0.7	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.7	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	2.6	< 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	1.7	< 0.5
Pyrene	0.5	mg/kg	0.7	1.7	< 0.5
Total PAH*	0.5	mg/kg	1.5	9	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	93	87
p-Terphenyl-d14 (surr.)	1	%	108	115	115
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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	121	93	100
Tetrachloro-m-xylene (surr.)	1	%	102	106	102

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
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	%	108	120	99
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	72	116	94
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	0.8	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.1	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.4	1.2
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 0.5	< 1
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	1.0	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.6	< 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	0.7	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.7	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.8	2.6	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	1.7	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.7	1.7	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	72	116	94
Nitrobenzene-d5 (surr.)	1	%	76	100	97
2-Fluorobiphenyl (surr.)	1	%	77	93	87
2.4.6-Tribromophenol (surr.)	1	%	69	77	72
Heavy Metals					
Arsenic	2	mg/kg	3.6	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.3	< 5	< 5
Copper	5	mg/kg	26	5.1	< 5
Lead	5	mg/kg	59	16	9.4
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	68	7.1	< 5
% Moisture	1	%	6.9	7.3	13
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	%	109	107	108
13C5-PFPeA (surr.)	1	%	132	146	141
13C5-PFHxA (surr.)	1	%	135	117	127

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C4-PFHpA (surr.)	1	%	113	117	112
13C8-PFOA (surr.)	1	%	126	116	127
13C5-PFNA (surr.)	1	%	133	123	132
13C6-PFDA (surr.)	1	%	108	102	108
13C2-PFUnDA (surr.)	1	%	138	127	130
13C2-PFDoDA (surr.)	1	%	140	131	130
13C2-PFTeDA (surr.)	1	%	133	141	153
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	%	105	111	102
D3-N-MeFOSA (surr.)	1	%	67	66	76
D5-N-EtFOSA (surr.)	1	%	93	101	105
D7-N-MeFOSE (surr.)	1	%	134	122	139
D9-N-EtFOSE (surr.)	1	%	128	132	136
D5-N-EtFOSAA (surr.)	1	%	100	97	91
D3-N-MeFOSAA (surr.)	1	%	99	99	94
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	%	153	138	138
18O2-PFHxS (surr.)	1	%	124	124	130
13C8-PFOS (surr.)	1	%	119	113	116
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	%	94	114	116
13C2-6:2 FTSA (surr.)	1	%	131	102	120
13C2-8:2 FTSA (surr.)	1	%	166	137	133
13C2-10:2 FTSA (surr.)	1	%	99	97	102

Client Sample ID			BH01_0.1	BH01_0.8	BH01_1.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09034	S20-No09036	S20-No09037
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
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
Acid Sulfate Soils Field pH Test					
pH-F (Field pH test)*	0.1	pH Units	-	-	9.3
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	-	7.9
Reaction Ratings*[S05]	-	comment	-	-	4.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 09, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Metals M8	Sydney	Nov 09, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 09, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 09, 2020	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Phenols (Halogenated)	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 09, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Nov 06, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 11, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 11, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 11, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 11, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Acid Sulfate Soils Field pH Test	Brisbane	Nov 11, 2020	7 Days
- Method: LTM-GEN-7060 Determination of field pH (pHF) and field pH peroxide (pHFOX) tests			

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Project Name: KAMAY WHARF PROJECT
Project ID: 564417

Order No.:
Report #: 755061
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP10_0.1	Nov 04, 2020		Soil	S20-No09029	X				X	X	X		X	X	
2	TP10_1.0	Nov 04, 2020		Soil	S20-No09030				X	X	X	X		X	X	
3	TP14_0.2	Nov 04, 2020		Soil	S20-No09031		X									
4	TP14_0.7	Nov 04, 2020		Soil	S20-No09032				X	X	X	X		X	X	
5	QC101_20201104	Nov 04, 2020		Soil	S20-No09033				X	X	X	X		X	X	
6	BH01_0.1	Nov 04, 2020		Soil	S20-No09034	X				X	X	X		X	X	
7	BH01_0.4	Nov 04, 2020		Soil	S20-No09035			X								
8	BH01_0.8	Nov 04, 2020		Soil	S20-No09036	X				X	X	X		X	X	

eurofins | Environment Testing

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Company Name: ERM Sydney
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NSW 2000

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Received: Nov 5, 2020 4:13 PM
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Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
9	BH01_1.1	Nov 04, 2020		Soil	S20-No09037				X	X	X	X		X	X	
10	QC301_20201104 (TB)	Nov 04, 2020		Water	S20-No09038								X			
11	QC401_20201104 (TS)	Nov 04, 2020		Water	S20-No09039											X
12	QC501_20201104	Nov 04, 2020		Water	S20-No09040					X		X		X	X	
Test Counts						3	1	1	4	8	7	8	1	8	8	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
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							
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 1			1	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 1			1	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 1			1	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 1			1	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	%	95			70-130	Pass	
TRH C10-C14	%	108			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	94			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	103			70-130	Pass	
o-Xylene	%	103			70-130	Pass	
Xylenes - Total*	%	103			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	106			70-130	Pass	
1.1.1-Trichloroethane	%	95			70-130	Pass	
1.2-Dichlorobenzene	%	108			70-130	Pass	
1.2-Dichloroethane	%	107			70-130	Pass	
Trichloroethene	%	96			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	97			70-130	Pass	
Acenaphthylene	%	96			70-130	Pass	
Anthracene	%	105			70-130	Pass	
Benz(a)anthracene	%	95			70-130	Pass	
Benzo(a)pyrene	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	%	88			70-130	Pass	
Benzo(g.h.i)perylene	%	89			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	93			70-130	Pass	
Chrysene	%	93			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	117			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	88			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	101			70-130	Pass	
Pyrene	%	117			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	128			70-130	Pass	
4.4'-DDD	%	99			70-130	Pass	
4.4'-DDE	%	119			70-130	Pass	
4.4'-DDT	%	107			70-130	Pass	
a-BHC	%	86			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-BHC	%	78			70-130	Pass	
d-BHC	%	96			70-130	Pass	
Dieldrin	%	108			70-130	Pass	
Endosulfan I	%	114			70-130	Pass	
Endosulfan II	%	95			70-130	Pass	
Endosulfan sulphate	%	96			70-130	Pass	
Endrin	%	123			70-130	Pass	
Endrin aldehyde	%	103			70-130	Pass	
Endrin ketone	%	99			70-130	Pass	
g-BHC (Lindane)	%	84			70-130	Pass	
Heptachlor	%	115			70-130	Pass	
Heptachlor epoxide	%	122			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	109			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	110			70-130	Pass	
Dimethoate	%	118			70-130	Pass	
Ethion	%	107			70-130	Pass	
Fenitrothion	%	127			70-130	Pass	
Methyl parathion	%	115			70-130	Pass	
Mevinphos	%	116			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	114			30-130	Pass	
2.4-Dichlorophenol	%	101			30-130	Pass	
2.4.5-Trichlorophenol	%	108			30-130	Pass	
2.4.6-Trichlorophenol	%	103			30-130	Pass	
2.6-Dichlorophenol	%	103			30-130	Pass	
4-Chloro-3-methylphenol	%	102			30-130	Pass	
Pentachlorophenol	%	117			30-130	Pass	
Tetrachlorophenols - Total	%	86			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	92			30-130	Pass	
2-Methylphenol (o-Cresol)	%	110			30-130	Pass	
2-Nitrophenol	%	116			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4-Dimethylphenol	%	106			30-130	Pass	
2.4-Dinitrophenol	%	118			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	127			30-130	Pass	
4-Nitrophenol	%	97			30-130	Pass	
Dinoseb	%	76			30-130	Pass	
Phenol	%	129			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	108			70-130	Pass	
1.3-Dichlorobenzene	%	90			70-130	Pass	
1.3.5-Trichlorobenzene	%	96			70-130	Pass	
1.4-Dichlorobenzene	%	101			70-130	Pass	
2.4-Dinitrotoluene	%	120			70-130	Pass	
N-Nitrosodipropylamine	%	122			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Cadmium	%	100			80-120	Pass	
Chromium	%	109			80-120	Pass	
Copper	%	109			80-120	Pass	
Lead	%	106			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	107			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	106			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	88			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	93			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	78			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	101			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	94			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	96			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	95			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	111			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	81			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	88			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	76			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	101			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	91			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	77			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	87			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	115			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)			%	99			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	124			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	83			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	119			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	95			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	106			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	S20-No12653	NCP	%	70			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-No12653	NCP	%	82			70-130	Pass	
Toluene	S20-No12653	NCP	%	79			70-130	Pass	
Ethylbenzene	S20-No12653	NCP	%	82			70-130	Pass	
m&p-Xylenes	S20-No12653	NCP	%	82			70-130	Pass	
o-Xylene	S20-No12653	NCP	%	83			70-130	Pass	
Xylenes - Total*	S20-No12653	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-No12653	NCP	%	89			70-130	Pass	
TRH C6-C10	S20-No12653	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No02652	NCP	%	103			70-130	Pass	
Acenaphthylene	S20-No02652	NCP	%	103			70-130	Pass	
Anthracene	S20-No02652	NCP	%	116			70-130	Pass	
Benz(a)anthracene	S20-No02652	NCP	%	97			70-130	Pass	
Benzo(a)pyrene	S20-No02652	NCP	%	95			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No02652	NCP	%	99			70-130	Pass	
Benzo(g.h.i)perylene	S20-No08580	NCP	%	90			70-130	Pass	
Benzo(k)fluoranthene	S20-No02652	NCP	%	102			70-130	Pass	
Chrysene	S20-No02652	NCP	%	96			70-130	Pass	
Dibenz(a.h)anthracene	S20-No02652	NCP	%	72			70-130	Pass	
Fluorene	S20-No02652	NCP	%	107			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No08580	NCP	%	101			70-130	Pass	
Naphthalene	S20-No02652	NCP	%	98			70-130	Pass	
Phenanthrene	S20-No02652	NCP	%	114			70-130	Pass	
Pyrene	S20-No02652	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-No10068	NCP	%	117			70-130	Pass	
4.4'-DDD	S20-No10068	NCP	%	93			70-130	Pass	
4.4'-DDE	S20-No10068	NCP	%	106			70-130	Pass	
4.4'-DDT	S20-No10068	NCP	%	108			70-130	Pass	
a-BHC	S20-No10068	NCP	%	78			70-130	Pass	
Aldrin	S20-No10068	NCP	%	109			70-130	Pass	
b-BHC	S20-No10068	NCP	%	76			70-130	Pass	
d-BHC	S20-No10068	NCP	%	91			70-130	Pass	
Dieldrin	S20-No10068	NCP	%	98			70-130	Pass	
Endosulfan I	S20-No10068	NCP	%	103			70-130	Pass	
Endosulfan II	S20-No10068	NCP	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	S20-No10068	NCP	%	91			70-130	Pass	
Endrin	S20-No10068	NCP	%	123			70-130	Pass	
Endrin aldehyde	S20-No10068	NCP	%	81			70-130	Pass	
Endrin ketone	S20-No10068	NCP	%	100			70-130	Pass	
g-BHC (Lindane)	S20-No10068	NCP	%	76			70-130	Pass	
Heptachlor	S20-No10068	NCP	%	113			70-130	Pass	
Heptachlor epoxide	S20-No10068	NCP	%	109			70-130	Pass	
Hexachlorobenzene	S20-No10068	NCP	%	97			70-130	Pass	
Methoxychlor	S20-No10068	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-No10068	NCP	%	113			70-130	Pass	
Dimethoate	S20-No10068	NCP	%	96			70-130	Pass	
Ethion	S20-No10068	NCP	%	108			70-130	Pass	
Fenitrothion	S20-No10068	NCP	%	112			70-130	Pass	
Methyl parathion	S20-No10068	NCP	%	102			70-130	Pass	
Mevinphos	S20-No10068	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No08580	NCP	%	108			30-130	Pass	
2.4-Dichlorophenol	S20-No08580	NCP	%	93			30-130	Pass	
2.4.5-Trichlorophenol	S20-No08580	NCP	%	85			30-130	Pass	
2.4.6-Trichlorophenol	S20-No08580	NCP	%	95			30-130	Pass	
2.6-Dichlorophenol	S20-No08580	NCP	%	95			30-130	Pass	
4-Chloro-3-methylphenol	S20-No08580	NCP	%	90			30-130	Pass	
Pentachlorophenol	S20-No08580	NCP	%	78			30-130	Pass	
Tetrachlorophenols - Total	S20-No08580	NCP	%	90			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S20-No10068	NCP	%	97			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S20-No08580	NCP	%	82			30-130	Pass	
2-Methylphenol (o-Cresol)	S20-No08580	NCP	%	91			30-130	Pass	
2-Nitrophenol	S20-No08580	NCP	%	121			30-130	Pass	
2.4-Dinitrophenol	S20-No08580	NCP	%	78			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No08580	NCP	%	99			30-130	Pass	
4-Nitrophenol	S20-No08580	NCP	%	83			30-130	Pass	
Dinoseb	S20-No08580	NCP	%	94			30-130	Pass	
Phenol	S20-No08580	NCP	%	114			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No09029	CP	%	97			75-125	Pass	
Cadmium	S20-No09029	CP	%	94			75-125	Pass	
Chromium	S20-No09029	CP	%	100			75-125	Pass	
Copper	S20-No09029	CP	%	99			75-125	Pass	
Lead	S20-No09029	CP	%	89			75-125	Pass	
Mercury	S20-No09029	CP	%	101			75-125	Pass	
Nickel	S20-No09029	CP	%	102			75-125	Pass	
Zinc	S20-No09029	CP	%	97			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No08542	NCP	%	103			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No08542	NCP	%	88			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No08542	NCP	%	90			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No08542	NCP	%	93			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanoic acid (PFOA)	S20-No08542	NCP	%	94			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No08542	NCP	%	99			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No08542	NCP	%	83			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No08542	NCP	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No08542	NCP	%	105			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No08542	NCP	%	92			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No08542	NCP	%	94			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No08542	NCP	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No08542	NCP	%	116			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No08542	NCP	%	120			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No08542	NCP	%	89			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No08542	NCP	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No08542	NCP	%	86			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No08542	NCP	%	100			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No08542	NCP	%	86			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No08542	NCP	%	103			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No08542	NCP	%	95			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No08542	NCP	%	83			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No08542	NCP	%	83			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No08542	NCP	%	103			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No08542	NCP	%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No08542	NCP	%	120			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No08542	NCP	%	84			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No08542	NCP	%	110			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No08542	NCP	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No08542	NCP	%	104			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-No09036	CP	%	75			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No09036	CP	%	74			70-130	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)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No08541	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No08541	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	W20-No13879	NCP	ug/kg	< 100	< 100	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No08541	NCP	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)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No08541	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No08541	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No09030	CP	%	5.0	5.0	1.0	30%	Pass	
Duplicate									
Acid Sulfate Soils Field pH Test				Result 1	Result 2	RPD			
pH-F (Field pH test)*	S20-No09030	CP	pH Units	9.4	9.4	pass	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No09032	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S20-No09032	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No09032	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S20-No09032	CP	mg/kg	5.1	< 5	8.0	30%	Pass	
Lead	S20-No09032	CP	mg/kg	5.7	10	58	30%	Fail	Q15
Mercury	S20-No09032	CP	mg/kg	< 0.1	0.2	110	30%	Fail	Q15
Nickel	S20-No09032	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-No09032	CP	mg/kg	7.6	13	53	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No09034	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-No09034	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No09034	CP	mg/kg	< 50	57	14	30%	Pass	
TRH C29-C36	S20-No09034	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No09034	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No09034	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No09034	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No09034	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No09034	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.3-Dichloropropane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No09034	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-No09034	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No09034	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No09034	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No09034	CP	mg/kg	< 0.5	0.5	31	30%	Fail	Q15
Benzo(a)pyrene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No09034	CP	mg/kg	0.8	1.0	25	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Fluorene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No09034	CP	mg/kg	0.7	0.9	28	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No09034	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No09034	CP	mg/kg	0.05	0.05	3.0	30%	Pass	
Endosulfan I	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No09034	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No09034	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No09034	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Omethoate	S20-No09034	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S20-No09034	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-No09034	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-No09034	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-No09034	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S20-No09034	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No09034	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S20-No09034	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S20-No09034	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
4-Aminobiphenyl	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
a-BHC	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S20-No09034	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S20-No09034	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S20-No09034	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No09037	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No09037	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No09037	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No09037	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No09037	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No09037	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No09037	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No09037	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No09037	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.
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

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Myles Clark	Senior Analyst-SPOCAS (QLD)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Sydney
NSW 2000

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Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **755061-W**
Project name KAMAY WHARF PROJECT
Project ID 564417
Received Date Nov 05, 2020

Client Sample ID			**QC301_20201104 (TB)**	**QC401_20201104 (TS)**	**QC501_20201104**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09038**	**S20-No09039**	**S20-No09040**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	130	-	137
BTEX					
Benzene	1	%	-	100	-
Ethylbenzene	1	%	-	95	-
m&p-Xylenes	1	%	-	98	-
o-Xylene	1	%	-	88	-
Toluene	1	%	-	100	-
Xylenes - Total	1	%	-	91	-
4-Bromofluorobenzene (surr.)	1	%	-	121	-

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09038	S20-No09039	S20-No09040
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
2-Butanone (MEK)	0.001	mg/L	-	-	< 0.001
2-Propanone (Acetone)	0.001	mg/L	-	-	< 0.001
4-Chlorotoluene	0.001	mg/L	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	-	-	< 0.001
Allyl chloride	0.001	mg/L	-	-	< 0.001
Benzene	0.001	mg/L	-	-	< 0.001
Bromobenzene	0.001	mg/L	-	-	< 0.001
Bromochloromethane	0.001	mg/L	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	-	-	< 0.001
Bromoform	0.001	mg/L	-	-	< 0.001
Bromomethane	0.001	mg/L	-	-	< 0.001
Carbon disulfide	0.001	mg/L	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	-	-	< 0.001
Chlorobenzene	0.001	mg/L	-	-	< 0.001
Chloroethane	0.001	mg/L	-	-	< 0.001
Chloroform	0.005	mg/L	-	-	< 0.005
Chloromethane	0.001	mg/L	-	-	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	-	-	< 0.001
Dibromomethane	0.001	mg/L	-	-	< 0.001
Dichlorodifluoromethane	0.001	mg/L	-	-	< 0.001
Ethylbenzene	0.001	mg/L	-	-	< 0.001
Iodomethane	0.001	mg/L	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	-	< 0.002
Methylene Chloride	0.001	mg/L	-	-	< 0.001
o-Xylene	0.001	mg/L	-	-	< 0.001
Styrene	0.001	mg/L	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	-	-	< 0.001
Toluene	0.001	mg/L	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09038**	**S20-No09039**	**S20-No09040**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
Test/Reference	LOR	Unit			
Volatile Organics					
Trichloroethene	0.001	mg/L	-	-	< 0.001
Trichlorofluoromethane	0.001	mg/L	-	-	< 0.001
Vinyl chloride	0.001	mg/L	-	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	-	< 0.003
Total MAH*	0.003	mg/L	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	-	-	137
Toluene-d8 (surr.)	1	%	-	-	113
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	99
p-Terphenyl-d14 (surr.)	1	%	-	-	133
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0001	mg/L	-	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09038**	**S20-No09039**	**S20-No09040**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.001	mg/L	-	-	< 0.001
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	108
Tetrachloro-m-xylene (surr.)	1	%	-	-	94
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.02	mg/L	-	-	< 0.02
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.002	mg/L	-	-	< 0.002
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	INT
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09038**	**S20-No09039**	**S20-No09040**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
Test/Reference	LOR	Unit			
Phenols (Halogenated)					
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	25
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
1-Chloronaphthalene	0.005	mg/L	-	-	< 0.005
1-Naphthylamine	0.002	mg/L	-	-	< 0.002
1.2-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.3-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.4-Trichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.4.5-Tetrachlorobenzene	0.002	mg/L	-	-	< 0.002
1.3-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.3.5-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.4-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
2-Chloronaphthalene	0.002	mg/L	-	-	< 0.002
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2-Methylnaphthalene	0.002	mg/L	-	-	< 0.002
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Naphthylamine	0.002	mg/L	-	-	< 0.002
2-Nitroaniline	0.004	mg/L	-	-	< 0.004
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2-Picoline	0.005	mg/L	-	-	< 0.005
2.3.4.6-Tetrachlorophenol	0.002	mg/L	-	-	< 0.002
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	-	-	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.6-Dinitrotoluene	0.004	mg/L	-	-	< 0.004
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09038	S20-No09039	S20-No09040
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
3-Methylcholanthrene	0.002	mg/L	-	-	< 0.002
3.3'-Dichlorobenzidine	0.005	mg/L	-	-	< 0.005
4-Aminobiphenyl	0.002	mg/L	-	-	< 0.002
4-Bromophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
4-Chlorophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
4.4'-DDD	0.002	mg/L	-	-	< 0.002
4.4'-DDE	0.002	mg/L	-	-	< 0.002
4.4'-DDT	0.004	mg/L	-	-	< 0.004
7.12-Dimethylbenz(a)anthracene	0.002	mg/L	-	-	< 0.002
a-BHC	0.002	mg/L	-	-	< 0.002
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Acetophenone	0.002	mg/L	-	-	< 0.002
Aldrin	0.002	mg/L	-	-	< 0.002
Aniline	0.002	mg/L	-	-	< 0.002
Anthracene	0.001	mg/L	-	-	< 0.001
b-BHC	0.002	mg/L	-	-	< 0.002
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Benzyl chloride	0.005	mg/L	-	-	< 0.005
Bis(2-chloroethoxy)methane	0.002	mg/L	-	-	< 0.002
Bis(2-chloroisopropyl)ether	0.002	mg/L	-	-	< 0.002
Bis(2-ethylhexyl)phthalate	0.02	mg/L	-	-	< 0.02
Butyl benzyl phthalate	0.002	mg/L	-	-	< 0.002
Chrysene	0.001	mg/L	-	-	< 0.001
d-BHC	0.002	mg/L	-	-	< 0.002
Di-n-butyl phthalate	0.002	mg/L	-	-	< 0.005
Di-n-octyl phthalate	0.002	mg/L	-	-	< 0.002
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	-	-	< 0.005
Dibenzofuran	0.002	mg/L	-	-	< 0.002
Dieldrin	0.002	mg/L	-	-	< 0.002
Diethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethylaminoazobenzene	0.002	mg/L	-	-	< 0.002
Diphenylamine	0.002	mg/L	-	-	< 0.002
Endosulfan I	0.002	mg/L	-	-	< 0.002
Endosulfan II	0.002	mg/L	-	-	< 0.002
Endosulfan sulphate	0.002	mg/L	-	-	< 0.002
Endrin	0.002	mg/L	-	-	< 0.002
Endrin aldehyde	0.002	mg/L	-	-	< 0.002
Endrin ketone	0.002	mg/L	-	-	< 0.002
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09038	S20-No09039	S20-No09040
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
g-BHC (Lindane)	0.002	mg/L	-	-	< 0.002
Heptachlor	0.002	mg/L	-	-	< 0.002
Heptachlor epoxide	0.002	mg/L	-	-	< 0.002
Hexachlorobenzene	0.002	mg/L	-	-	< 0.002
Hexachlorobutadiene	0.002	mg/L	-	-	< 0.002
Hexachlorocyclopentadiene	0.004	mg/L	-	-	< 0.004
Hexachloroethane	0.002	mg/L	-	-	< 0.002
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Methoxychlor	0.005	mg/L	-	-	< 0.005
N-Nitrosodibutylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosodipropylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosopiperidine	0.002	mg/L	-	-	< 0.002
Naphthalene	0.001	mg/L	-	-	< 0.001
Nitrobenzene	0.005	mg/L	-	-	< 0.005
Pentachlorobenzene	0.002	mg/L	-	-	< 0.002
Pentachloronitrobenzene	0.002	mg/L	-	-	< 0.002
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Phenanthrene	0.001	mg/L	-	-	< 0.001
Phenol	0.003	mg/L	-	-	< 0.003
Pronamide	0.005	mg/L	-	-	< 0.005
Pyrene	0.001	mg/L	-	-	< 0.001
Trifluralin	0.005	mg/L	-	-	< 0.005
Phenol-d6 (surr.)	1	%	-	-	25
Nitrobenzene-d5 (surr.)	1	%	-	-	INT
2-Fluorobiphenyl (surr.)	1	%	-	-	99
2.4.6-Tribromophenol (surr.)	1	%	-	-	INT
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	-	-	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	-	-	< 0.01
13C4-PFBA (surr.)	1	%	-	-	68
13C5-PFPeA (surr.)	1	%	-	-	101

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09038	S20-No09039	S20-No09040
Date Sampled			Nov 04, 2020	Nov 04, 2020	Nov 04, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C5-PFHxA (surr.)	1	%	-	-	77
13C4-PFHpA (surr.)	1	%	-	-	85
13C8-PFOA (surr.)	1	%	-	-	91
13C5-PFNA (surr.)	1	%	-	-	83
13C6-PFDA (surr.)	1	%	-	-	78
13C2-PFUnDA (surr.)	1	%	-	-	73
13C2-PFDoDA (surr.)	1	%	-	-	73
13C2-PFTeDA (surr.)	1	%	-	-	72
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	-	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
13C8-FOSA (surr.)	1	%	-	-	62
D3-N-MeFOSA (surr.)	1	%	-	-	55
D5-N-EtFOSA (surr.)	1	%	-	-	54
D7-N-MeFOSE (surr.)	1	%	-	-	51
D9-N-EtFOSE (surr.)	1	%	-	-	49
D5-N-EtFOSAA (surr.)	1	%	-	-	43
D3-N-MeFOSAA (surr.)	1	%	-	-	55
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	-	-	< 0.01
13C3-PFBS (surr.)	1	%	-	-	95
18O2-PFHxS (surr.)	1	%	-	-	98
13C8-PFOS (surr.)	1	%	-	-	98
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	-	-	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	-	51
13C2-6:2 FTSA (surr.)	1	%	-	-	97
13C2-8:2 FTSA (surr.)	1	%	-	-	89
13C2-10:2 FTSA (surr.)	1	%	-	-	77

Client Sample ID			QC301_20201104 (TB)	QC401_20201104 (TS)	QC501_20201104
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09038**	**S20-No09039**	**S20-No09040**
Date Sampled			**Nov 04, 2020**	**Nov 04, 2020**	**Nov 04, 2020**
Test/Reference	LOR	Unit			
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	-	-	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	-	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	-	-	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Metals M8	Sydney	Nov 06, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 06, 2020	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Phenols (Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project ID: 564417

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Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	TP10_0.1	Nov 04, 2020		Soil	S20-No09029	X				X	X	X		X	X	
2	TP10_1.0	Nov 04, 2020		Soil	S20-No09030				X	X	X	X		X	X	
3	TP14_0.2	Nov 04, 2020		Soil	S20-No09031		X									
4	TP14_0.7	Nov 04, 2020		Soil	S20-No09032				X	X	X	X		X	X	
5	QC101_20201104	Nov 04, 2020		Soil	S20-No09033				X	X	X	X		X	X	
6	BH01_0.1	Nov 04, 2020		Soil	S20-No09034	X				X	X	X		X	X	
7	BH01_0.4	Nov 04, 2020		Soil	S20-No09035			X								
8	BH01_0.8	Nov 04, 2020		Soil	S20-No09036	X				X	X	X		X	X	

eurofins | Environment Testing

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Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	CANCELLED	HOLD	Acid Sulfate Soils Field pH Test	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																
Sydney Laboratory - NATA Site # 18217						X	X	X		X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794									X						X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory																
External Laboratory																
9	BH01_1.1	Nov 04, 2020		Soil	S20-No09037				X	X	X	X		X	X	
10	QC301_20201104 (TB)	Nov 04, 2020		Water	S20-No09038								X			
11	QC401_20201104 (TS)	Nov 04, 2020		Water	S20-No09039											X
12	QC501_20201104	Nov 04, 2020		Water	S20-No09040					X		X		X	X	
Test Counts						3	1	1	4	8	7	8	1	8	8	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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 - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.002			0.002	Pass	
1.2-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
2-Chloronaphthalene	mg/L	< 0.002			0.002	Pass	
2-Methylnaphthalene	mg/L	< 0.002			0.002	Pass	
2-Naphthylamine	mg/L	< 0.002			0.002	Pass	
2-Nitroaniline	mg/L	< 0.004			0.004	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.004			0.004	Pass	
3-Methylcholanthrene	mg/L	< 0.002			0.002	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.002			0.002	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.002			0.002	Pass	
4.4'-DDE	mg/L	< 0.002			0.002	Pass	
4.4'-DDT	mg/L	< 0.004			0.004	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.002			0.002	Pass	
Acetophenone	mg/L	< 0.002			0.002	Pass	
Aldrin	mg/L	< 0.002			0.002	Pass	
Aniline	mg/L	< 0.002			0.002	Pass	
b-BHC	mg/L	< 0.002			0.002	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.002			0.002	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.002			0.002	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.02			0.02	Pass	
Butyl benzyl phthalate	mg/L	< 0.002			0.002	Pass	
d-BHC	mg/L	< 0.002			0.002	Pass	
Di-n-butyl phthalate	mg/L	< 0.002			0.002	Pass	
Di-n-octyl phthalate	mg/L	< 0.002			0.002	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/L	< 0.002			0.002	Pass	
Diethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethylaminoazobenzene	mg/L	< 0.002			0.002	Pass	
Diphenylamine	mg/L	< 0.002			0.002	Pass	
Endosulfan I	mg/L	< 0.002			0.002	Pass	
Endosulfan II	mg/L	< 0.002			0.002	Pass	
Endosulfan sulphate	mg/L	< 0.002			0.002	Pass	
Endrin	mg/L	< 0.002			0.002	Pass	
Endrin aldehyde	mg/L	< 0.002			0.002	Pass	
Endrin ketone	mg/L	< 0.002			0.002	Pass	
g-BHC (Lindane)	mg/L	< 0.002			0.002	Pass	
Heptachlor	mg/L	< 0.002			0.002	Pass	
Heptachlor epoxide	mg/L	< 0.002			0.002	Pass	
Hexachlorobenzene	mg/L	< 0.002			0.002	Pass	
Hexachlorobutadiene	mg/L	< 0.002			0.002	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.004			0.004	Pass	
Hexachloroethane	mg/L	< 0.002			0.002	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosodipropylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosopiperidine	mg/L	< 0.002			0.002	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.002			0.002	Pass	
Pentachloronitrobenzene	mg/L	< 0.002			0.002	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	110			70-130	Pass	
TRH C6-C10	%	123			70-130	Pass	
TRH >C10-C16	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	128			70-130	Pass	
TRH C10-C14	%	106			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	99			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	105			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
o-Xylene	%	105			70-130	Pass	
Xylenes - Total*	%	106			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	109			70-130	Pass	
1.1.1-Trichloroethane	%	96			70-130	Pass	
1.2-Dichlorobenzene	%	100			70-130	Pass	
1.2-Dichloroethane	%	101			70-130	Pass	
Trichloroethene	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	93			70-130	Pass	
Acenaphthylene	%	88			70-130	Pass	
Anthracene	%	83			70-130	Pass	
Benz(a)anthracene	%	98			70-130	Pass	
Benzo(a)pyrene	%	96			70-130	Pass	
Benzo(b&j)fluoranthene	%	118			70-130	Pass	
Benzo(g.h.i)perylene	%	130			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	115			70-130	Pass	
Chrysene	%	100			70-130	Pass	
Dibenz(a.h)anthracene	%	129			70-130	Pass	
Fluoranthene	%	91			70-130	Pass	
Fluorene	%	95			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	121			70-130	Pass	
Naphthalene	%	86			70-130	Pass	
Phenanthrene	%	92			70-130	Pass	
Pyrene	%	98			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	102			70-130	Pass	
4.4'-DDE	%	103			70-130	Pass	
a-BHC	%	102			70-130	Pass	
Aldrin	%	99			70-130	Pass	
b-BHC	%	101			70-130	Pass	
d-BHC	%	117			70-130	Pass	
Endosulfan I	%	109			70-130	Pass	
Endosulfan II	%	81			70-130	Pass	
Endosulfan sulphate	%	115			70-130	Pass	
Endrin ketone	%	111			70-130	Pass	
g-BHC (Lindane)	%	112			70-130	Pass	
Heptachlor epoxide	%	102			70-130	Pass	
Hexachlorobenzene	%	102			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	78			70-130	Pass	
Ethion	%	88			70-130	Pass	
Fenitrothion	%	93			70-130	Pass	
Methyl parathion	%	99			70-130	Pass	
Mevinphos	%	108			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	54			30-130	Pass	
2.4-Dichlorophenol	%	82			30-130	Pass	
2.4.5-Trichlorophenol	%	82			30-130	Pass	
2.4.6-Trichlorophenol	%	81			30-130	Pass	
2.6-Dichlorophenol	%	81			30-130	Pass	
4-Chloro-3-methylphenol	%	59			30-130	Pass	
Pentachlorophenol	%	41			30-130	Pass	
Tetrachlorophenols - Total	%	79			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	90			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	88			30-130	Pass	
2-Methylphenol (o-Cresol)	%	58			30-130	Pass	
2-Nitrophenol	%	91			30-130	Pass	
2.4-Dimethylphenol	%	44			30-130	Pass	
2.4-Dinitrophenol	%	39			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	59			30-130	Pass	
4-Nitrophenol	%	44			30-130	Pass	
Dinoseb	%	108			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenol	%	40			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	83			70-130	Pass	
2.4-Dinitrotoluene	%	97			70-130	Pass	
N-Nitrosodipropylamine	%	78			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	110			80-120	Pass	
Lead	%	111			80-120	Pass	
Mercury	%	116			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	108			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	87			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	80			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	83			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	85			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	79			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	98			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	105			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	120			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	82			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	143			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	122			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	130			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	141			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	143			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	139			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	112			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	109			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	87			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	91			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	120			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	92			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	89			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	107			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	75			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	104			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	100			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No08183	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-No08183	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No08155	NCP	%	109			70-130	Pass	
Acenaphthylene	S20-No08155	NCP	%	107			70-130	Pass	
Anthracene	S20-No08155	NCP	%	111			70-130	Pass	
Benz(a)anthracene	S20-No08155	NCP	%	115			70-130	Pass	
Benzo(a)pyrene	S20-No08155	NCP	%	112			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No08155	NCP	%	110			70-130	Pass	
Benzo(g.h.i)perylene	S20-No08155	NCP	%	115			70-130	Pass	
Benzo(k)fluoranthene	S20-No08155	NCP	%	110			70-130	Pass	
Chrysene	S20-No08155	NCP	%	107			70-130	Pass	
Dibenz(a.h)anthracene	S20-No08155	NCP	%	122			70-130	Pass	
Fluoranthene	S20-No08155	NCP	%	90			70-130	Pass	
Fluorene	S20-No08155	NCP	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No08155	NCP	%	115			70-130	Pass	
Naphthalene	S20-No08155	NCP	%	100			70-130	Pass	
Phenanthrene	S20-No08155	NCP	%	99			70-130	Pass	
Pyrene	S20-No08155	NCP	%	96			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No08144	NCP	%	82			30-130	Pass	
2.4-Dichlorophenol	S20-No08144	NCP	%	90			30-130	Pass	
2.4.5-Trichlorophenol	S20-No08144	NCP	%	96			30-130	Pass	
2.4.6-Trichlorophenol	S20-No08144	NCP	%	87			30-130	Pass	
2.6-Dichlorophenol	S20-No08144	NCP	%	103			30-130	Pass	
4-Chloro-3-methylphenol	S20-No08144	NCP	%	80			30-130	Pass	
Pentachlorophenol	S20-No08144	NCP	%	92			30-130	Pass	
Tetrachlorophenols - Total	S20-No08144	NCP	%	99			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methylphenol (o-Cresol)	S20-No08144	NCP	%	54			30-130	Pass	
2-Nitrophenol	S20-No08144	NCP	%	123			30-130	Pass	
2.4-Dimethylphenol	S20-No08144	NCP	%	70			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No08144	NCP	%	39			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No07184	NCP	%	98			75-125	Pass	
Cadmium	S20-No07184	NCP	%	104			75-125	Pass	
Chromium	S20-No07184	NCP	%	107			75-125	Pass	
Copper	S20-No07184	NCP	%	106			75-125	Pass	
Lead	S20-No07184	NCP	%	110			75-125	Pass	
Mercury	S20-No07184	NCP	%	110			75-125	Pass	
Nickel	S20-No07184	NCP	%	108			75-125	Pass	
Zinc	S20-No07184	NCP	%	104			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No08577	NCP	%	101			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No08577	NCP	%	87			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorohexanoic acid (PFHxA)	S20-No08577	NCP	%	92			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No08577	NCP	%	82			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No08577	NCP	%	87			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No08577	NCP	%	84			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No08577	NCP	%	95			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No08577	NCP	%	98			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No08577	NCP	%	85			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No08577	NCP	%	85			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No08577	NCP	%	94			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No08577	NCP	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No08577	NCP	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No08577	NCP	%	96			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No08577	NCP	%	110			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No08577	NCP	%	93			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No08577	NCP	%	94			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No08577	NCP	%	97			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No08577	NCP	%	90			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No08577	NCP	%	144			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No08577	NCP	%	104			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No08577	NCP	%	106			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No08577	NCP	%	70			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No08577	NCP	%	142			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No08577	NCP	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No08577	NCP	%	84			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No08577	NCP	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No08577	NCP	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No08577	NCP	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No08577	NCP	%	89			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-No16379	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-No16379	NCP	mg/L	0.08	0.09	15	30%	Pass	
TRH >C10-C16	S20-No08183	NCP	mg/L	0.44	0.40	10	30%	Pass	
TRH >C16-C34	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-No16379	NCP	mg/L	0.08	0.08	8.0	30%	Pass	
TRH C10-C14	S20-No08183	NCP	mg/L	0.33	0.32	2.0	30%	Pass	
TRH C15-C28	S20-No08183	NCP	mg/L	0.3	0.3	12	30%	Pass	
TRH C29-C36	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-No16379	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-No16379	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	M20-No16379	NCP	mg/L	0.013	0.013	5.0	30%	Pass	
Bromoform	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	M20-No16379	NCP	mg/L	0.089	0.094	5.0	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Chloromethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	M20-No16379	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Dibromomethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	M20-No16379	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S20-No08154	NCP	mg/L	0.004	0.006	27	30%	Pass	
Phenanthrene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S20-No08154	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-No08154	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-No08154	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-No08154	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	S20-No08154	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	S20-No08154	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-No08154	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Nitrophenol	S20-No08154	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	S20-No08154	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No08154	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	S20-No08154	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
Dinoseb	S20-No08154	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	S20-No08154	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No07182	NCP	mg/L	0.006	0.006	3.0	30%	Pass	
Cadmium	S20-No07182	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-No07182	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-No07182	NCP	mg/L	0.003	0.003	2.0	30%	Pass	
Lead	S20-No07182	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-No07182	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-No07182	NCP	mg/L	0.001	0.002	45	30%	Fail	Q15
Zinc	S20-No07182	NCP	mg/L	0.013	0.015	17	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluoroheptanesulfonic acid (PFHpS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<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)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No09040	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No09040	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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eurofins | Environment Testing

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Company Name: ERM Sydney
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Sydney
NSW 2000

Project Name: ADDITIONAL - KAMAY WHARF PROJECT
Project ID: 0564417

Order No.:
Report #: 755093
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC301_20201103	Nov 03, 2020		Water	S20-No09378					X			
2	QC401_20201103	Nov 03, 2020		Water	S20-No09379								X
3	QC501_20201103	Nov 03, 2020		Water	S20-No09380		X		X		X	X	
4	TP06_0.4	Nov 03, 2020		Soil	S20-No09381	X	X	X	X		X	X	
5	TP14_0.2	Nov 03, 2020		Soil	S20-No09382	X	X	X	X		X	X	
6	TP21_0.1	Nov 03, 2020		Soil	S20-No09383	X	X	X	X		X	X	
Test Counts						3	4	3	4	1	4	4	1

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	755093-AID
Project Name	ADDITIONAL - KAMAY WHARF PROJECT
Project ID	0564417
Received Date	Nov 05, 2020
Date Reported	Nov 12, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name ADDITIONAL - KAMAY WHARF PROJECT
Project ID 0564417
Date Sampled Nov 03, 2020
Report 755093-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP06_0.4	20-No09381	Nov 03, 2020	Approximate Sample 71g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP14_0.2	20-No09382	Nov 03, 2020	Approximate Sample 723g Sample consisted of: Brown fine-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP21_0.1	20-No09383	Nov 03, 2020	Approximate Sample 700g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2020	Indefinite

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
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NSW 2000

Project Name: ADDITIONAL - KAMAY WHARF PROJECT
Project ID: 0564417

Order No.:
Report #: 755093
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC301_20201103	Nov 03, 2020		Water	S20-No09378					X			
2	QC401_20201103	Nov 03, 2020		Water	S20-No09379								X
3	QC501_20201103	Nov 03, 2020		Water	S20-No09380		X		X		X	X	
4	TP06_0.4	Nov 03, 2020		Soil	S20-No09381	X	X	X	X		X	X	
5	TP14_0.2	Nov 03, 2020		Soil	S20-No09382	X	X	X	X		X	X	
6	TP21_0.1	Nov 03, 2020		Soil	S20-No09383	X	X	X	X		X	X	
Test Counts						3	4	3	4	1	4	4	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

S20-No09381: The sample received was not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-sample to be analysed accurately represented the sample received.

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **755093-S**
Project name ADDITIONAL - KAMAY WHARF PROJECT
Project ID 0564417
Received Date Nov 05, 2020

Client Sample ID			**TP06_0.4**	**TP14_0.2**	**TP21_0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No09381**	**S20-No09382**	**S20-No09383**
Date Sampled			**Nov 03, 2020**	**Nov 03, 2020**	**Nov 03, 2020**
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	%	85	89	82
Volatile Organics					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	85	89	82
Toluene-d8 (surr.)	1	%	89	83	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	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

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	90	107	97
p-Terphenyl-d14 (surr.)	1	%	101	126	114
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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	87	119	95
Tetrachloro-m-xylene (surr.)	1	%	97	117	105

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
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	%	97	112	113
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	94	104	119
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 1	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	94	104	119
Nitrobenzene-d5 (surr.)	1	%	105	127	113
2-Fluorobiphenyl (surr.)	1	%	90	107	97
2.4.6-Tribromophenol (surr.)	1	%	65	68	100
Heavy Metals					
Arsenic	2	mg/kg	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	< 5	< 5	< 5
Lead	5	mg/kg	15	11	9.9
Mercury	0.1	mg/kg	< 0.1	0.2	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	19	15	26
% Moisture	1	%	2.6	8.0	11
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	%	119	119	120
13C5-PFPeA (surr.)	1	%	147	147	144
13C5-PFHxA (surr.)	1	%	116	115	119

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No09381	S20-No09382	S20-No09383
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C4-PFHpA (surr.)	1	%	127	126	124
13C8-PFOA (surr.)	1	%	138	132	122
13C5-PFNA (surr.)	1	%	137	136	144
13C6-PFDA (surr.)	1	%	138	145	141
13C2-PFUnDA (surr.)	1	%	143	141	142
13C2-PFDoDA (surr.)	1	%	156	151	134
13C2-PFTeDA (surr.)	1	%	137	130	109
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	%	122	121	106
D3-N-MeFOSA (surr.)	1	%	90	86	90
D5-N-EtFOSA (surr.)	1	%	101	103	101
D7-N-MeFOSE (surr.)	1	%	138	129	121
D9-N-EtFOSE (surr.)	1	%	145	128	137
D5-N-EtFOSAA (surr.)	1	%	105	107	90
D3-N-MeFOSAA (surr.)	1	%	96	104	100
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	%	114	116	115
18O2-PFHxS (surr.)	1	%	115	124	119
13C8-PFOS (surr.)	1	%	115	117	114
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	%	36	58	82
13C2-6:2 FTSA (surr.)	1	%	57	66	84
13C2-8:2 FTSA (surr.)	1	%	108	99	104
13C2-10:2 FTSA (surr.)	1	%	114	111	108

Client Sample ID			TP06_0.4	TP14_0.2	TP21_0.1
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No09381**	**S20-No09382**	**S20-No09383**
Date Sampled			**Nov 03, 2020**	**Nov 03, 2020**	**Nov 03, 2020**
Test/Reference	LOR	Unit			
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

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Metals M8	Sydney	Nov 06, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 06, 2020	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Phenols (Halogenated)	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Nov 06, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 06, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 06, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 11, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 11, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT
Project ID: 0564417

Order No.:
Report #: 755093
Phone: 02 8584 8888
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Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC301_20201103	Nov 03, 2020		Water	S20-No09378					X			
2	QC401_20201103	Nov 03, 2020		Water	S20-No09379								X
3	QC501_20201103	Nov 03, 2020		Water	S20-No09380		X		X		X	X	
4	TP06_0.4	Nov 03, 2020		Soil	S20-No09381	X	X	X	X		X	X	
5	TP14_0.2	Nov 03, 2020		Soil	S20-No09382	X	X	X	X		X	X	
6	TP21_0.1	Nov 03, 2020		Soil	S20-No09383	X	X	X	X		X	X	
Test Counts						3	4	3	4	1	4	4	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
ug/L: micrograms per litre
ppm: Parts per million
ppb: Parts per billion
%: Percentage
org/100mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
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							
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 1			1	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 1			1	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 1			1	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 1			1	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	%	95			70-130	Pass	
TRH C10-C14	%	108			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	92			70-130	Pass	
Toluene	%	95			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	99			70-130	Pass	
o-Xylene	%	101			70-130	Pass	
Xylenes - Total*	%	100			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	90			70-130	Pass	
1.1.1-Trichloroethane	%	95			70-130	Pass	
1.2-Dichlorobenzene	%	106			70-130	Pass	
1.2-Dichloroethane	%	103			70-130	Pass	
Trichloroethene	%	81			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	81			70-130	Pass	
TRH C6-C10	%	90			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	97			70-130	Pass	
Acenaphthylene	%	96			70-130	Pass	
Anthracene	%	105			70-130	Pass	
Benz(a)anthracene	%	95			70-130	Pass	
Benzo(a)pyrene	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	%	88			70-130	Pass	
Benzo(g.h.i)perylene	%	89			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	93			70-130	Pass	
Chrysene	%	93			70-130	Pass	
Dibenz(a.h)anthracene	%	94			70-130	Pass	
Fluoranthene	%	117			70-130	Pass	
Fluorene	%	98			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	88			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	101			70-130	Pass	
Pyrene	%	117			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	128			70-130	Pass	
4.4'-DDD	%	99			70-130	Pass	
4.4'-DDE	%	119			70-130	Pass	
4.4'-DDT	%	107			70-130	Pass	
a-BHC	%	86			70-130	Pass	
Aldrin	%	117			70-130	Pass	
b-BHC	%	78			70-130	Pass	
d-BHC	%	96			70-130	Pass	
Dieldrin	%	108			70-130	Pass	
Endosulfan I	%	114			70-130	Pass	
Endosulfan II	%	95			70-130	Pass	
Endosulfan sulphate	%	96			70-130	Pass	
Endrin	%	123			70-130	Pass	
Endrin aldehyde	%	103			70-130	Pass	
Endrin ketone	%	99			70-130	Pass	
g-BHC (Lindane)	%	84			70-130	Pass	
Heptachlor	%	115			70-130	Pass	
Heptachlor epoxide	%	122			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	109			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	110			70-130	Pass	
Dimethoate	%	118			70-130	Pass	
Ethion	%	107			70-130	Pass	
Fenitrothion	%	127			70-130	Pass	
Methyl parathion	%	115			70-130	Pass	
Mevinphos	%	116			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	114			30-130	Pass	
2.4-Dichlorophenol	%	101			30-130	Pass	
2.4.5-Trichlorophenol	%	108			30-130	Pass	
2.4.6-Trichlorophenol	%	103			30-130	Pass	
2.6-Dichlorophenol	%	103			30-130	Pass	
4-Chloro-3-methylphenol	%	102			30-130	Pass	
Pentachlorophenol	%	117			30-130	Pass	
Tetrachlorophenols - Total	%	86			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	92			30-130	Pass	
2-Methylphenol (o-Cresol)	%	110			30-130	Pass	
2-Nitrophenol	%	116			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4-Dimethylphenol	%	106			30-130	Pass	
2.4-Dinitrophenol	%	118			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	127			30-130	Pass	
4-Nitrophenol	%	97			30-130	Pass	
Dinoseb	%	76			30-130	Pass	
Phenol	%	129			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	108			70-130	Pass	
1.3-Dichlorobenzene	%	90			70-130	Pass	
1.3.5-Trichlorobenzene	%	96			70-130	Pass	
1.4-Dichlorobenzene	%	101			70-130	Pass	
2.4-Dinitrotoluene	%	120			70-130	Pass	
N-Nitrosodipropylamine	%	122			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	106			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	99			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	106			80-120	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	97			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	91			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	91			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	105			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	98			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	98			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	88			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	95			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	89			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	103			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	75			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	95			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	106			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	70			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	81			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	61			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	85			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	80			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	109			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	100			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	78			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	99			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)			%	92			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	87			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	132			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	119			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	103			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	116			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	S20-No12653	NCP	%	70			70-130	Pass	
TRH C10-C14	S20-No09036	NCP	%	75			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-No12653	NCP	%	82			70-130	Pass	
Toluene	S20-No12653	NCP	%	79			70-130	Pass	
Ethylbenzene	S20-No12653	NCP	%	82			70-130	Pass	
m&p-Xylenes	S20-No12653	NCP	%	82			70-130	Pass	
o-Xylene	S20-No12653	NCP	%	83			70-130	Pass	
Xylenes - Total*	S20-No12653	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-No12653	NCP	%	89			70-130	Pass	
TRH C6-C10	S20-No12653	NCP	%	71			70-130	Pass	
TRH >C10-C16	S20-No09036	NCP	%	74			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No02652	NCP	%	103			70-130	Pass	
Acenaphthylene	S20-No02652	NCP	%	103			70-130	Pass	
Anthracene	S20-No02652	NCP	%	116			70-130	Pass	
Benz(a)anthracene	S20-No02652	NCP	%	97			70-130	Pass	
Benzo(a)pyrene	S20-No02652	NCP	%	95			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No02652	NCP	%	99			70-130	Pass	
Benzo(g.h.i)perylene	S20-No08580	NCP	%	90			70-130	Pass	
Benzo(k)fluoranthene	S20-No02652	NCP	%	102			70-130	Pass	
Chrysene	S20-No02652	NCP	%	96			70-130	Pass	
Dibenz(a.h)anthracene	S20-No02652	NCP	%	72			70-130	Pass	
Fluorene	S20-No02652	NCP	%	107			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No08580	NCP	%	101			70-130	Pass	
Naphthalene	S20-No02652	NCP	%	98			70-130	Pass	
Phenanthrene	S20-No02652	NCP	%	114			70-130	Pass	
Pyrene	S20-No02652	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-No10068	NCP	%	117			70-130	Pass	
4.4'-DDD	S20-No10068	NCP	%	93			70-130	Pass	
4.4'-DDE	S20-No10068	NCP	%	106			70-130	Pass	
4.4'-DDT	S20-No10068	NCP	%	108			70-130	Pass	
a-BHC	S20-No10068	NCP	%	78			70-130	Pass	
Aldrin	S20-No10068	NCP	%	109			70-130	Pass	
b-BHC	S20-No10068	NCP	%	76			70-130	Pass	
d-BHC	S20-No10068	NCP	%	91			70-130	Pass	
Dieldrin	S20-No10068	NCP	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	S20-No10068	NCP	%	103			70-130	Pass	
Endosulfan II	S20-No10068	NCP	%	98			70-130	Pass	
Endosulfan sulphate	S20-No10068	NCP	%	91			70-130	Pass	
Endrin	S20-No10068	NCP	%	123			70-130	Pass	
Endrin aldehyde	S20-No10068	NCP	%	81			70-130	Pass	
Endrin ketone	S20-No10068	NCP	%	100			70-130	Pass	
g-BHC (Lindane)	S20-No10068	NCP	%	76			70-130	Pass	
Heptachlor	S20-No10068	NCP	%	113			70-130	Pass	
Heptachlor epoxide	S20-No10068	NCP	%	109			70-130	Pass	
Hexachlorobenzene	S20-No10068	NCP	%	97			70-130	Pass	
Methoxychlor	S20-No10068	NCP	%	110			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-No10068	NCP	%	113			70-130	Pass	
Dimethoate	S20-No10068	NCP	%	96			70-130	Pass	
Ethion	S20-No10068	NCP	%	108			70-130	Pass	
Fenitrothion	S20-No10068	NCP	%	112			70-130	Pass	
Methyl parathion	S20-No10068	NCP	%	102			70-130	Pass	
Mevinphos	S20-No10068	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No08580	NCP	%	108			30-130	Pass	
2.4-Dichlorophenol	S20-No08580	NCP	%	93			30-130	Pass	
2.4.5-Trichlorophenol	S20-No08580	NCP	%	85			30-130	Pass	
2.4.6-Trichlorophenol	S20-No08580	NCP	%	95			30-130	Pass	
2.6-Dichlorophenol	S20-No08580	NCP	%	95			30-130	Pass	
4-Chloro-3-methylphenol	S20-No08580	NCP	%	90			30-130	Pass	
Pentachlorophenol	S20-No08580	NCP	%	78			30-130	Pass	
Tetrachlorophenols - Total	S20-No08580	NCP	%	90			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	S20-No10068	NCP	%	97			30-130	Pass	
2-Methyl-4.6-dinitrophenol	S20-No08580	NCP	%	82			30-130	Pass	
2-Methylphenol (o-Cresol)	S20-No08580	NCP	%	91			30-130	Pass	
2-Nitrophenol	S20-No08580	NCP	%	121			30-130	Pass	
2.4-Dinitrophenol	S20-No08580	NCP	%	78			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No08580	NCP	%	99			30-130	Pass	
4-Nitrophenol	S20-No08580	NCP	%	83			30-130	Pass	
Dinoseb	S20-No08580	NCP	%	94			30-130	Pass	
Phenol	S20-No08580	NCP	%	114			30-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No15831	NCP	%	89			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No15831	NCP	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No15831	NCP	%	101			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No15831	NCP	%	97			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No15831	NCP	%	104			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No15831	NCP	%	90			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No15831	NCP	%	88			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No15831	NCP	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No15831	NCP	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No15831	NCP	%	99			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorotetradecanoic acid (PFTeDA)	S20-No15831	NCP	%	73			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No15831	NCP	%	87			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No15831	NCP	%	93			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No15831	NCP	%	90			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No15831	NCP	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No15831	NCP	%	71			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No15831	NCP	%	89			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No15831	NCP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No15831	NCP	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No15831	NCP	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No15831	NCP	%	87			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No15831	NCP	%	72			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No15831	NCP	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No15831	NCP	%	79			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No15831	NCP	%	93			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No15831	NCP	%	85			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No15831	NCP	%	110			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No15831	NCP	%	110			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No15831	NCP	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No15831	NCP	%	121			50-150	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No09383	CP	%	104			75-125	Pass	
Cadmium	S20-No09383	CP	%	105			75-125	Pass	
Chromium	S20-No09383	CP	%	102			75-125	Pass	
Copper	S20-No09383	CP	%	95			75-125	Pass	
Lead	S20-No09383	CP	%	102			75-125	Pass	
Mercury	S20-No09383	CP	%	106			75-125	Pass	
Nickel	S20-No09383	CP	%	100			75-125	Pass	
Zinc	S20-No09383	CP	%	111			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S20-No09037	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-No09034	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No09034	NCP	mg/kg	< 50	57	14	30%	Pass	
TRH C29-C36	S20-No09034	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No09037	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No09037	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No09037	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No09037	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No09037	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No09037	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Isopropyl benzene (Cumene)	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No09037	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No09037	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-No09034	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No09034	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No09034	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No09034	NCP	mg/kg	< 0.5	0.5	31	30%	Fail	Q15
Benzo(a)pyrene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No09034	NCP	mg/kg	0.8	1.0	25	30%	Pass	
Fluorene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No09034	NCP	mg/kg	0.7	0.9	28	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No09034	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No09034	NCP	mg/kg	0.05	0.05	3.0	30%	Pass	
Endosulfan I	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Hexachlorobenzene	S20-No09034	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No09034	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No09034	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-No09034	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S20-No09034	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-No09034	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-No09034	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-No09034	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2.4-Dimethylphenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S20-No09034	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No09034	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S20-No09034	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S20-No09034	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
a-BHC	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S20-No09034	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dimethylaminoazobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S20-No09034	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S20-No09034	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No08047	NCP	mg/kg	3.2	3.5	7.0	30%	Pass	
Cadmium	S20-No08047	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No08047	NCP	mg/kg	16	17	10	30%	Pass	
Copper	S20-No08047	NCP	mg/kg	29	26	12	30%	Pass	
Lead	S20-No08047	NCP	mg/kg	17	18	3.0	30%	Pass	
Mercury	S20-No08047	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No08047	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-No08047	NCP	mg/kg	38	33	15	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No09382	CP	%	8.0	8.0	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No09382	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No09382	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No09382	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)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No09382	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No09382	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No09382	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
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Asim Khan	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
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Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **755093-W**
Project name ADDITIONAL - KAMAY WHARF PROJECT
Project ID 0564417
Received Date Nov 05, 2020

Client Sample ID			**QC301_20201103**	**QC401_20201103**	**QC501_20201103**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09378**	**S20-No09379**	**S20-No09380**
Date Sampled			**Nov 03, 2020**	**Nov 03, 2020**	**Nov 03, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	111	-	114
BTEX					
Benzene	1	%	-	120	-
Ethylbenzene	1	%	-	92	-
m&p-Xylenes	1	%	-	100	-
o-Xylene	1	%	-	97	-
Toluene	1	%	-	100	-
Xylenes - Total	1	%	-	98	-
4-Bromofluorobenzene (surr.)	1	%	-	105	-

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
2-Butanone (MEK)	0.001	mg/L	-	-	< 0.001
2-Propanone (Acetone)	0.001	mg/L	-	-	< 0.001
4-Chlorotoluene	0.001	mg/L	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	-	-	< 0.001
Allyl chloride	0.001	mg/L	-	-	< 0.001
Benzene	0.001	mg/L	-	-	< 0.001
Bromobenzene	0.001	mg/L	-	-	< 0.001
Bromochloromethane	0.001	mg/L	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	-	-	< 0.001
Bromoform	0.001	mg/L	-	-	< 0.001
Bromomethane	0.001	mg/L	-	-	< 0.001
Carbon disulfide	0.001	mg/L	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	-	-	< 0.001
Chlorobenzene	0.001	mg/L	-	-	< 0.001
Chloroethane	0.001	mg/L	-	-	< 0.001
Chloroform	0.005	mg/L	-	-	< 0.005
Chloromethane	0.001	mg/L	-	-	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	-	-	< 0.001
Dibromomethane	0.001	mg/L	-	-	< 0.001
Dichlorodifluoromethane	0.001	mg/L	-	-	< 0.001
Ethylbenzene	0.001	mg/L	-	-	< 0.001
Iodomethane	0.001	mg/L	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	-	< 0.002
Methylene Chloride	0.001	mg/L	-	-	< 0.001
o-Xylene	0.001	mg/L	-	-	< 0.001
Styrene	0.001	mg/L	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	-	-	< 0.001
Toluene	0.001	mg/L	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
Trichloroethene	0.001	mg/L	-	-	< 0.001
Trichlorofluoromethane	0.001	mg/L	-	-	< 0.001
Vinyl chloride	0.001	mg/L	-	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	-	< 0.003
Total MAH*	0.003	mg/L	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	-	-	114
Toluene-d8 (surr.)	1	%	-	-	91
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	66
p-Terphenyl-d14 (surr.)	1	%	-	-	66
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0001	mg/L	-	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.001	mg/L	-	-	< 0.001
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	127
Tetrachloro-m-xylene (surr.)	1	%	-	-	94
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.02	mg/L	-	-	< 0.02
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.002	mg/L	-	-	< 0.002
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	89
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Phenols (Halogenated)					
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	48
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
1-Chloronaphthalene	0.005	mg/L	-	-	< 0.005
1-Naphthylamine	0.002	mg/L	-	-	< 0.002
1.2-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.3-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.4-Trichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.4.5-Tetrachlorobenzene	0.002	mg/L	-	-	< 0.002
1.3-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.3.5-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.4-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
2-Chloronaphthalene	0.002	mg/L	-	-	< 0.002
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2-Methylnaphthalene	0.002	mg/L	-	-	< 0.002
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Naphthylamine	0.002	mg/L	-	-	< 0.002
2-Nitroaniline	0.004	mg/L	-	-	< 0.004
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2-Picoline	0.005	mg/L	-	-	< 0.005
2.3.4.6-Tetrachlorophenol	0.002	mg/L	-	-	< 0.002
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	-	-	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.6-Dinitrotoluene	0.004	mg/L	-	-	< 0.004
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
3-Methylcholanthrene	0.002	mg/L	-	-	< 0.002
3.3'-Dichlorobenzidine	0.005	mg/L	-	-	< 0.005
4-Aminobiphenyl	0.002	mg/L	-	-	< 0.002
4-Bromophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
4-Chlorophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
4.4'-DDD	0.002	mg/L	-	-	< 0.002
4.4'-DDE	0.002	mg/L	-	-	< 0.002
4.4'-DDT	0.004	mg/L	-	-	< 0.004
7.12-Dimethylbenz(a)anthracene	0.002	mg/L	-	-	< 0.002
a-BHC	0.002	mg/L	-	-	< 0.002
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Acetophenone	0.002	mg/L	-	-	< 0.002
Aldrin	0.002	mg/L	-	-	< 0.002
Aniline	0.002	mg/L	-	-	< 0.002
Anthracene	0.001	mg/L	-	-	< 0.001
b-BHC	0.002	mg/L	-	-	< 0.002
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Benzyl chloride	0.005	mg/L	-	-	< 0.005
Bis(2-chloroethoxy)methane	0.002	mg/L	-	-	< 0.002
Bis(2-chloroisopropyl)ether	0.002	mg/L	-	-	< 0.002
Bis(2-ethylhexyl)phthalate	0.02	mg/L	-	-	< 0.02
Butyl benzyl phthalate	0.002	mg/L	-	-	< 0.002
Chrysene	0.001	mg/L	-	-	< 0.001
d-BHC	0.002	mg/L	-	-	< 0.002
Di-n-butyl phthalate	0.002	mg/L	-	-	< 0.005
Di-n-octyl phthalate	0.002	mg/L	-	-	< 0.002
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	-	-	< 0.005
Dibenzofuran	0.002	mg/L	-	-	< 0.002
Dieldrin	0.002	mg/L	-	-	< 0.002
Diethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethylaminoazobenzene	0.002	mg/L	-	-	< 0.002
Diphenylamine	0.002	mg/L	-	-	< 0.002
Endosulfan I	0.002	mg/L	-	-	< 0.002
Endosulfan II	0.002	mg/L	-	-	< 0.002
Endosulfan sulphate	0.002	mg/L	-	-	< 0.002
Endrin	0.002	mg/L	-	-	< 0.002
Endrin aldehyde	0.002	mg/L	-	-	< 0.002
Endrin ketone	0.002	mg/L	-	-	< 0.002
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
g-BHC (Lindane)	0.002	mg/L	-	-	< 0.002
Heptachlor	0.002	mg/L	-	-	< 0.002
Heptachlor epoxide	0.002	mg/L	-	-	< 0.002
Hexachlorobenzene	0.002	mg/L	-	-	< 0.002
Hexachlorobutadiene	0.002	mg/L	-	-	< 0.002
Hexachlorocyclopentadiene	0.004	mg/L	-	-	< 0.004
Hexachloroethane	0.002	mg/L	-	-	< 0.002
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Methoxychlor	0.005	mg/L	-	-	< 0.005
N-Nitrosodibutylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosodipropylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosopiperidine	0.002	mg/L	-	-	< 0.002
Naphthalene	0.001	mg/L	-	-	< 0.001
Nitrobenzene	0.005	mg/L	-	-	< 0.005
Pentachlorobenzene	0.002	mg/L	-	-	< 0.002
Pentachloronitrobenzene	0.002	mg/L	-	-	< 0.002
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Phenanthrene	0.001	mg/L	-	-	< 0.001
Phenol	0.003	mg/L	-	-	< 0.003
Pronamide	0.005	mg/L	-	-	< 0.005
Pyrene	0.001	mg/L	-	-	< 0.001
Trifluralin	0.005	mg/L	-	-	< 0.005
Phenol-d6 (surr.)	1	%	-	-	48
Nitrobenzene-d5 (surr.)	1	%	-	-	INT
2-Fluorobiphenyl (surr.)	1	%	-	-	66
2.4.6-Tribromophenol (surr.)	1	%	-	-	140
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	-	-	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	-	-	< 0.01
13C4-PFBA (surr.)	1	%	-	-	110
13C5-PFPeA (surr.)	1	%	-	-	150

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No09378	S20-No09379	S20-No09380
Date Sampled			Nov 03, 2020	Nov 03, 2020	Nov 03, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C5-PFHxA (surr.)	1	%	-	-	130
13C4-PFHpA (surr.)	1	%	-	-	153
13C8-PFOA (surr.)	1	%	-	-	139
13C5-PFNA (surr.)	1	%	-	-	151
13C6-PFDA (surr.)	1	%	-	-	116
13C2-PFUnDA (surr.)	1	%	-	-	92
13C2-PFDoDA (surr.)	1	%	-	-	62
13C2-PFTeDA (surr.)	1	%	-	-	20
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	-	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
13C8-FOSA (surr.)	1	%	-	-	78
D3-N-MeFOSA (surr.)	1	%	-	-	37
D5-N-EtFOSA (surr.)	1	%	-	-	33
D7-N-MeFOSE (surr.)	1	%	-	-	82
D9-N-EtFOSE (surr.)	1	%	-	-	81
D5-N-EtFOSAA (surr.)	1	%	-	-	INT
D3-N-MeFOSAA (surr.)	1	%	-	-	INT
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	-	-	< 0.01
13C3-PFBS (surr.)	1	%	-	-	127
18O2-PFHxS (surr.)	1	%	-	-	126
13C8-PFOS (surr.)	1	%	-	-	115
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	-	-	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	-	120
13C2-6:2 FTSA (surr.)	1	%	-	-	104
13C2-8:2 FTSA (surr.)	1	%	-	-	129
13C2-10:2 FTSA (surr.)	1	%	-	-	65

Client Sample ID			QC301_20201103	QC401_20201103	QC501_20201103
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No09378**	**S20-No09379**	**S20-No09380**
Date Sampled			**Nov 03, 2020**	**Nov 03, 2020**	**Nov 03, 2020**
Test/Reference	LOR	Unit			
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	-	-	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	-	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	-	-	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 06, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 06, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Metals M8	Sydney	Nov 06, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 06, 2020	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Phenols (Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 06, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 10, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Received: Nov 5, 2020 4:13 PM
Due: Nov 12, 2020
Priority: 5 Day
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Sample Detail						Asbestos - AS4964	Phenols (IWRG 621)	Moisture Set	Eurofins Suite B10	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC301_20201103	Nov 03, 2020		Water	S20-No09378					X			
2	QC401_20201103	Nov 03, 2020		Water	S20-No09379								X
3	QC501_20201103	Nov 03, 2020		Water	S20-No09380		X		X		X	X	
4	TP06_0.4	Nov 03, 2020		Soil	S20-No09381	X	X	X	X		X	X	
5	TP14_0.2	Nov 03, 2020		Soil	S20-No09382	X	X	X	X		X	X	
6	TP21_0.1	Nov 03, 2020		Soil	S20-No09383	X	X	X	X		X	X	
Test Counts						3	4	3	4	1	4	4	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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 - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Benzene	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.002			0.002	Pass	
1.2-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
2-Chloronaphthalene	mg/L	< 0.002			0.002	Pass	
2-Methylnaphthalene	mg/L	< 0.002			0.002	Pass	
2-Naphthylamine	mg/L	< 0.002			0.002	Pass	
2-Nitroaniline	mg/L	< 0.004			0.004	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.004			0.004	Pass	
3-Methylcholanthrene	mg/L	< 0.002			0.002	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.002			0.002	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.002			0.002	Pass	
4.4'-DDE	mg/L	< 0.002			0.002	Pass	
4.4'-DDT	mg/L	< 0.004			0.004	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.002			0.002	Pass	
Acetophenone	mg/L	< 0.002			0.002	Pass	
Aldrin	mg/L	< 0.002			0.002	Pass	
Aniline	mg/L	< 0.002			0.002	Pass	
b-BHC	mg/L	< 0.002			0.002	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Bis(2-chloroisopropyl)ether	mg/L	< 0.002			0.002	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.02			0.02	Pass	
Butyl benzyl phthalate	mg/L	< 0.002			0.002	Pass	
d-BHC	mg/L	< 0.002			0.002	Pass	
Di-n-butyl phthalate	mg/L	< 0.002			0.002	Pass	
Di-n-octyl phthalate	mg/L	< 0.002			0.002	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.002			0.002	Pass	
Dieldrin	mg/L	< 0.002			0.002	Pass	
Diethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethylaminoazobenzene	mg/L	< 0.002			0.002	Pass	
Diphenylamine	mg/L	< 0.002			0.002	Pass	
Endosulfan I	mg/L	< 0.002			0.002	Pass	
Endosulfan II	mg/L	< 0.002			0.002	Pass	
Endosulfan sulphate	mg/L	< 0.002			0.002	Pass	
Endrin	mg/L	< 0.002			0.002	Pass	
Endrin aldehyde	mg/L	< 0.002			0.002	Pass	
Endrin ketone	mg/L	< 0.002			0.002	Pass	
g-BHC (Lindane)	mg/L	< 0.002			0.002	Pass	
Heptachlor	mg/L	< 0.002			0.002	Pass	
Heptachlor epoxide	mg/L	< 0.002			0.002	Pass	
Hexachlorobenzene	mg/L	< 0.002			0.002	Pass	
Hexachlorobutadiene	mg/L	< 0.002			0.002	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.004			0.004	Pass	
Hexachloroethane	mg/L	< 0.002			0.002	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosodipropylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosopiperidine	mg/L	< 0.002			0.002	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.002			0.002	Pass	
Pentachloronitrobenzene	mg/L	< 0.002			0.002	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	114			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
TRH C6-C10	%	107			70-130	Pass	
TRH >C10-C16	%	76			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	107			70-130	Pass	
TRH C10-C14	%	82			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	93			70-130	Pass	
m&p-Xylenes	%	98			70-130	Pass	
o-Xylene	%	97			70-130	Pass	
Xylenes - Total*	%	97			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	98			70-130	Pass	
1.2-Dichlorobenzene	%	102			70-130	Pass	
1.2-Dichloroethane	%	112			70-130	Pass	
Benzene	%	88			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	103			70-130	Pass	
o-Xylene	%	107			70-130	Pass	
Toluene	%	100			70-130	Pass	
Trichloroethene	%	97			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	100			70-130	Pass	
Acenaphthylene	%	94			70-130	Pass	
Anthracene	%	97			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	100			70-130	Pass	
Benzo(b&j)fluoranthene	%	108			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	98			70-130	Pass	
Chrysene	%	102			70-130	Pass	
Dibenz(a.h)anthracene	%	92			70-130	Pass	
Fluoranthene	%	92			70-130	Pass	
Fluorene	%	97			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	92			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	100			70-130	Pass	
Pyrene	%	99			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	75			70-130	Pass	
4.4'-DDD	%	112			70-130	Pass	
4.4'-DDE	%	90			70-130	Pass	
4.4'-DDT	%	82			70-130	Pass	
a-BHC	%	87			70-130	Pass	
Aldrin	%	76			70-130	Pass	
b-BHC	%	90			70-130	Pass	
d-BHC	%	93			70-130	Pass	
Dieldrin	%	84			70-130	Pass	
Endosulfan I	%	93			70-130	Pass	
Endosulfan sulphate	%	105			70-130	Pass	
Endrin	%	90			70-130	Pass	
Endrin ketone	%	106			70-130	Pass	
g-BHC (Lindane)	%	94			70-130	Pass	
Heptachlor	%	87			70-130	Pass	
Heptachlor epoxide	%	82			70-130	Pass	
Methoxychlor	%	107			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	125			70-130	Pass	
Dimethoate	%	126			70-130	Pass	
Ethion	%	116			70-130	Pass	
Fenitrothion	%	104			70-130	Pass	
Methyl parathion	%	105			70-130	Pass	
Mevinphos	%	125			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	96			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4-Dichlorophenol	%	93			30-130	Pass	
2.4.5-Trichlorophenol	%	94			30-130	Pass	
2.4.6-Trichlorophenol	%	92			30-130	Pass	
2.6-Dichlorophenol	%	94			30-130	Pass	
4-Chloro-3-methylphenol	%	104			30-130	Pass	
Pentachlorophenol	%	78			30-130	Pass	
Tetrachlorophenols - Total	%	88			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	90			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	95			30-130	Pass	
2-Methylphenol (o-Cresol)	%	86			30-130	Pass	
2-Nitrophenol	%	101			30-130	Pass	
2.4-Dimethylphenol	%	90			30-130	Pass	
2.4-Dinitrophenol	%	62			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	79			30-130	Pass	
4-Nitrophenol	%	64			30-130	Pass	
Dinoseb	%	98			30-130	Pass	
Phenol	%	57			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	73			70-130	Pass	
1.3.5-Trichlorobenzene	%	79			70-130	Pass	
1.4-Dichlorobenzene	%	72			70-130	Pass	
2.4-Dinitrotoluene	%	84			70-130	Pass	
N-Nitrosodipropylamine	%	90			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	102			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	110			80-120	Pass	
Lead	%	111			80-120	Pass	
Mercury	%	116			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	108			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	104			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	104			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	99			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	104			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	100			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	98			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	104			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	73			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	88			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	70			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	132			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	123			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	114			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	137			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	83			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	106			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	93			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	114			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	85			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	110			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	89			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	147			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	125			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	132			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No08183	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-No08183	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No07184	NCP	%	98			75-125	Pass	
Cadmium	S20-No07184	NCP	%	104			75-125	Pass	
Chromium	S20-No07184	NCP	%	107			75-125	Pass	
Copper	S20-No07184	NCP	%	106			75-125	Pass	
Lead	S20-No07184	NCP	%	110			75-125	Pass	
Mercury	S20-No07184	NCP	%	110			75-125	Pass	
Nickel	S20-No07184	NCP	%	108			75-125	Pass	
Zinc	S20-No07184	NCP	%	104			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No09380	CP	%	119			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No09380	CP	%	107			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No09380	CP	%	104			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No09380	CP	%	107			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No09380	CP	%	109			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No09380	CP	%	112			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No09380	CP	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No09380	CP	%	109			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No09380	CP	%	120			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No09380	CP	%	113			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No09380	CP	%	97			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)	S20-No09380	CP	%	95			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No09380	CP	%	100			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No09380	CP	%	116			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No09380	CP	%	127			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No09380	CP	%	118			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No09380	CP	%	105			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No09380	CP	%	78			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No09380	CP	%	95			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No09380	CP	%	108			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No09380	CP	%	124			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No09380	CP	%	111			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No09380	CP	%	120			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No09380	CP	%	99			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No09380	CP	%	117			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No09380	CP	%	100			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No09380	CP	%	55			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No09380	CP	%	143			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No09380	CP	%	119			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No09380	CP	%	128			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-No08183	NCP	mg/L	0.44	0.40	10	30%	Pass	
TRH >C16-C34	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-No08183	NCP	mg/L	0.33	0.32	2.0	30%	Pass	
TRH C15-C28	S20-No08183	NCP	mg/L	0.3	0.3	12	30%	Pass	
TRH C29-C36	S20-No08183	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No07182	NCP	mg/L	0.006	0.006	3.0	30%	Pass	
Cadmium	S20-No07182	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-No07182	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-No07182	NCP	mg/L	0.003	0.003	2.0	30%	Pass	
Lead	S20-No07182	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-No07182	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-No07182	NCP	mg/L	0.001	0.002	45	30%	Fail	Q15
Zinc	S20-No07182	NCP	mg/L	0.013	0.015	17	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<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)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No09380	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No09380	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Asim Khan	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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

eurofins | Environment Testing

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Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Ian Batterley
Project name:	KAMAY WHARF PROJECT LA PEROUSE
Project ID:	Not provided
Turnaround time:	1 Day
Date/Time received	Nov 12, 2020 4:40 PM
Eurofins reference	756487

Sample Information

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

Notes

Contact

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

Alena Bounkeua on phone : or by email: AlenaBounkeua@eurofins.com

Results will be delivered electronically via email to Ian Batterley - ian.batterley@erm.com.

Note: A copy of these results will also be delivered to the general ERM Sydney email address.

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
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NSW 2000

Project Name: KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 756487
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 12, 2020 4:40 PM
Due: Nov 13, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	LP-BH01-0.1-ACM	Nov 12, 2020		Building Materials	S20-No21437		X	
2	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No21438	X		
3	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No21439	X		
4	LP-TP10-0.1-ACM	Nov 12, 2020		Building Materials	S20-No21440		X	
5	LP-TP04-0.2-ACM	Nov 12, 2020		Building Materials	S20-No21441		X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No21442	X		
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No21443			X
8	QC101_20201	Nov 12, 2020		Soil	S20-No21444			X

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Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
	112							
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No21445			X
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No21446			X
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No21447			X
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No21448			X
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No21449			X
14	QC501_20201112	Nov 12, 2020		Water	S20-No21450			X
15	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No21451			X
16	QC301_20201112 (TRIP	Nov 12, 2020		Water	S20-No21452			X

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Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
	BLANK)							
17	LP-TP07-0.2-ACM	Nov 12, 2020		Building Materials	S20-No21493		X	
Test Counts						3	4	10

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	756487-AID
Project Name	KAMAY WHARF PROJECT LA PEROUSE
Received Date	Nov 12, 2020
Date Reported	Nov 13, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name KAMAY WHARF PROJECT LA PEROUSE
Project ID
Date Sampled Nov 12, 2020
Report 756487-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
LP-BH01-0.1-ACM	20-No21437	Nov 12, 2020	Approximate Sample 8g / 50x30x3mm Sample consisted of: Grey compressed fibre cement fragments	Chrysotile asbestos detected.
LP-BH01-0.1	20-No21438	Nov 12, 2020	Approximate Sample 764g Sample consisted of: Brown coarse-grained sandy soil, rocks, glass fragments and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP10-0.1	20-No21439	Nov 12, 2020	Approximate Sample 752g Sample consisted of: Brown coarse-grained sandy soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP10-0.1-ACM	20-No21440	Nov 12, 2020	Approximate Sample 4g / 60x20x3mm Sample consisted of: Grey compressed fibre cement material	Chrysotile asbestos detected.
LP-TP04-0.2-ACM	20-No21441	Nov 12, 2020	Approximate Sample 82g / 100x70x4mm Sample consisted of: Brown layered fibre cement material	Chrysotile and amosite asbestos detected.
LP-TP04-0.2	20-No21442	Nov 12, 2020	Approximate Sample 699g Sample consisted of: Brown coarse-grained sandy soil, rocks and organic debris	Chrysotile and amosite asbestos detected in weathered fibrous material. Approximate raw weight of asbestos containing material = 0.042g* Total estimated asbestos content in the sample = 0.013g* Total estimated asbestos concentration = 0.0018% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
LP-TP07-0.2-ACM	20-No21493	Nov 12, 2020	Approximate Sample 3g / 25x15x3mm Sample consisted of: Grey compressed fibre cement material	Chrysotile asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 13, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 13, 2020	Indefinite

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Received: Nov 12, 2020 4:40 PM
Due: Nov 13, 2020
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	HOLD
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**			
1	LP-BH01-0.1-ACM	Nov 12, 2020		Building Materials	S20-No21437		X	
2	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No21438	X		
3	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No21439	X		
4	LP-TP10-0.1-ACM	Nov 12, 2020		Building Materials	S20-No21440		X	
5	LP-TP04-0.2-ACM	Nov 12, 2020		Building Materials	S20-No21441		X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No21442	X		
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No21443			X
8	QC101_20201	Nov 12, 2020		Soil	S20-No21444			X

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Mayfield Laboratory								
External Laboratory								
	112							
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No21445			X
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No21446			X
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No21447			X
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No21448			X
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No21449			X
14	QC501_20201112	Nov 12, 2020		Water	S20-No21450			X
15	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No21451			X
16	QC301_20201112 (TRIP	Nov 12, 2020		Water	S20-No21452			X

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Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
Mayfield Laboratory								
External Laboratory								
	BLANK)							
17	LP-TP07-0.2-ACM	Nov 12, 2020		Building Materials	S20-No21493		X	
Test Counts						3	4	10

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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#AU04_Enviro_Sample_NSW

To: Tristan Rodrigues; Alena Bounkeua
Cc: Ian Batterley
Subject: RE: 0564417- COC La Perouse

From: Tristan Rodrigues <Tristan.Rodrigues@erm.com>
Sent: Monday, 16 November 2020 2:47 PM
To: Alena Bounkeua <AlenaBounkeua@eurofins.com>
Cc: #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>; Ian Batterley <Ian.Batterley@erm.com>
Subject: 0564417- COC La Perouse

Hi Alena,

Could we please have the following samples analysed on Standard Turnaround times from COC 756487 and attached COCs for samples delivered last week

Sample ID	Date	Analysis recommended
LP-TP01-0.1	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP01_0.5	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
QC101_20201111	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
QC201_20201111 (Send to ALS)	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
QC301_20201111	11/11/2020	TRH, BTEX
QC301_20201112 No21452	12/11/2020	TRH, BTEX
QC401_20201111	11/11/2020	BTEX
QC401_20201112 No21451	12/11/2020	BTEX
QC501_20201111	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
QC501_20201112 No21450	12/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP01_1.1	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
LP-TP02_0.1	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP02_0.4	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP02_0.7	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, ASS
LP-TP02_1.0	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
LP-TP03_0.2	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP03_0.5	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP03_0.7	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS

additional analysis : # 757204

LP-TP04-0.2 No21442	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP05-0.2 No21443	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
QC101_20201112 No21444	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP05-0.4 No21445	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP06-0.2 No21448	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP06-0.25 No21449	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP07-0.1 No21446	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP07-0.2 No21447	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP10- 0.1 No21439	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-BH01-0. 1 No21438	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS

Kind Regards,

Tristan Rodrigues
Environmental Consultant

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ERM *The business of sustainability*

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC501_20201112	Nov 12, 2020		Water	S20-No27421		X		X		X	X	
2	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No27422								X
3	QC301_20201112 (TRIP BLANK)	Nov 12, 2020		Water	S20-No27423					X			
4	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No27424		X	X	X		X	X	
5	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No27425		X	X	X		X	X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No27426		X	X	X		X	X	

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No27427	X	X	X	X		X	X	
8	QC101_20201112	Nov 12, 2020		Soil	S20-No27428	X	X	X	X		X	X	
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No27429	X	X	X	X		X	X	
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No27430	X	X	X	X		X	X	
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No27431	X	X	X	X		X	X	
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No27432	X	X	X	X		X	X	
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No27433	X	X	X	X		X	X	
Test Counts						7	11	10	11	1	11	11	1

Certificate of Analysis

Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	757204-AID
Project Name	ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE
Received Date	Nov 16, 2020
Date Reported	Nov 24, 2020

Methodology:

Asbestos Fibre Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.
NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.
NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.
NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-containing material (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004.
NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).
The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).
NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE
Project ID
Date Sampled Nov 12, 2020
Report 757204-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
LP-TP05-0.2	20-No27427	Nov 12, 2020	Approximate Sample 778g Sample consisted of: Brown fine-grained sandy soil, rocks and bituminous fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC101_20201112	20-No27428	Nov 12, 2020	Approximate Sample 806g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP05-0.4	20-No27429	Nov 12, 2020	Approximate Sample 835g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP07-0.1	20-No27430	Nov 12, 2020	Approximate Sample 584g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP07-0.2	20-No27431	Nov 12, 2020	Approximate Sample 672g Sample consisted of: Brown fine-grained sandy soil, rocks, glass, cement and bituminous fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP06-0.2	20-No27432	Nov 12, 2020	Approximate Sample 651g Sample consisted of: Brown fine-grained sandy soil, rocks and bituminous fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP06-0.25	20-No27433	Nov 12, 2020	Approximate Sample 932g Sample consisted of: Brown fine-grained sandy soil, rocks and bituminous fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 17, 2020	Indefinite

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC501_20201112	Nov 12, 2020		Water	S20-No27421		X		X		X	X	
2	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No27422								X
3	QC301_20201112 (TRIP BLANK)	Nov 12, 2020		Water	S20-No27423					X			
4	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No27424		X	X	X		X	X	
5	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No27425		X	X	X		X	X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No27426		X	X	X		X	X	

eurofins | Environment Testing

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NATA # 1261
Site # 23736

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No27427	X	X	X	X		X	X	
8	QC101_20201112	Nov 12, 2020		Soil	S20-No27428	X	X	X	X		X	X	
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No27429	X	X	X	X		X	X	
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No27430	X	X	X	X		X	X	
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No27431	X	X	X	X		X	X	
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No27432	X	X	X	X		X	X	
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No27433	X	X	X	X		X	X	
Test Counts						7	11	10	11	1	11	11	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **757204-S**
Project name ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE
Received Date Nov 16, 2020

Client Sample ID			**LP-BH01-0.1**	**LP-TP10-0.1**	**LP-TP04-0.2**	**LP-TP05-0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No27424**	**S20-No27425**	**S20-No27426**	**S20-No27427**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
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	97	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	150	< 50	86	56
TRH C10-C36 (Total)	50	mg/kg	247	< 50	86	56
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	%	115	144	126	132
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	115	144	126	132
Toluene-d8 (surr.)	1	%	94	89	92	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	180	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	150	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	330	< 100	< 100	< 100

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.1	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.4	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	0.6	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.7	< 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	0.7	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.8	< 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	1.0	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	5.4	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	91	75	84	76
p-Terphenyl-d14 (surr.)	1	%	94	83	92	75
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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	64	82	88	61
Tetrachloro-m-xylene (surr.)	1	%	89	76	85	74

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
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
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	%	95	65	87	50
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	115	58	73	61
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.1	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.4	1.2	1.2	1.2
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	0.6	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	0.7	< 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	0.7	< 0.5	< 0.5	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	0.8	< 0.5	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	1.0	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	1.1	< 0.5	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	115	58	73	61
Nitrobenzene-d5 (surr.)	1	%	66	65	75	66
2-Fluorobiphenyl (surr.)	1	%	91	75	84	76
2.4.6-Tribromophenol (surr.)	1	%	64	INT	68	INT
Heavy Metals						
Arsenic	2	mg/kg	2.2	5.2	2.4	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	28	< 5	7.6
Copper	5	mg/kg	87	30	< 5	23
Lead	5	mg/kg	100	110	16	18
Mercury	0.1	mg/kg	< 0.1	0.4	< 0.1	0.1
Nickel	5	mg/kg	15	< 5	< 5	6.5
Zinc	5	mg/kg	540	55	13	48
% Moisture	1	%	10	8.4	6.8	7.8
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	%	88	88	91	84
13C5-PFPeA (surr.)	1	%	104	107	107	103
13C5-PFHxA (surr.)	1	%	114	114	118	110

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	107	110	113	106
13C8-PFOA (surr.)	1	%	109	108	114	106
13C5-PFNA (surr.)	1	%	108	111	110	104
13C6-PFDA (surr.)	1	%	106	110	111	110
13C2-PFUnDA (surr.)	1	%	109	117	111	100
13C2-PFDoDA (surr.)	1	%	116	112	117	114
13C2-PFTeDA (surr.)	1	%	138	145	147	147
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	%	106	101	107	98
D3-N-MeFOSA (surr.)	1	%	92	96	91	94
D5-N-EtFOSA (surr.)	1	%	94	96	90	97
D7-N-MeFOSE (surr.)	1	%	106	104	104	107
D9-N-EtFOSE (surr.)	1	%	100	106	98	102
D5-N-EtFOSAA (surr.)	1	%	157	142	152	118
D3-N-MeFOSAA (surr.)	1	%	143	122	145	115
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	%	112	115	110	112
18O2-PFHxS (surr.)	1	%	107	104	105	107
13C8-PFOS (surr.)	1	%	113	106	111	110
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	%	110	106	103	87
13C2-6:2 FTSA (surr.)	1	%	112	138	114	101
13C2-8:2 FTSA (surr.)	1	%	117	124	130	93
13C2-10:2 FTSA (surr.)	1	%	141	120	133	100

Client Sample ID			LP-BH01-0.1	LP-TP10-0.1	LP-TP04-0.2	LP-TP05-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27424	S20-No27425	S20-No27426	S20-No27427
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
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			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
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	51	< 50	120	110
TRH C29-C36	50	mg/kg	68	< 50	150	160
TRH C10-C36 (Total)	50	mg/kg	119	< 50	270	270
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	%	126	124	129	108
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	126	124	129	108
Toluene-d8 (surr.)	1	%	91	107	95	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	220	190
TRH >C34-C40	100	mg/kg	< 100	< 100	130	170
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	350	360

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.9
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	0.6	0.6
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	0.6
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.5	< 0.5	0.7	0.8
Total PAH*	0.5	mg/kg	1	< 0.5	1.8	3.5
2-Fluorobiphenyl (surr.)	1	%	88	87	76	90
p-Terphenyl-d14 (surr.)	1	%	82	91	87	90
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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	55	81	78	57
Tetrachloro-m-xylene (surr.)	1	%	83	83	81	83

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
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
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	%	56	80	78	72
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	56	55	INT	65
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.9
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	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	0.6	0.6
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	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
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	0.5	< 0.5	0.5	0.6
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.5	< 0.5	0.7	0.8
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	56	55	INT	65
Nitrobenzene-d5 (surr.)	1	%	75	79	62	78
2-Fluorobiphenyl (surr.)	1	%	88	87	76	90
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	INT
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	4.1	2.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.7	0.8
Chromium	5	mg/kg	7.8	14	19	18
Copper	5	mg/kg	20	51	140	150
Lead	5	mg/kg	20	< 5	190	220
Mercury	0.1	mg/kg	0.1	< 0.1	0.1	0.1
Nickel	5	mg/kg	5.7	49	13	13
Zinc	5	mg/kg	46	59	890	930
% Moisture	1	%	7.2	7.3	14	9.8
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	%	86	92	79	80
13C5-PFPeA (surr.)	1	%	103	117	97	99
13C5-PFHxA (surr.)	1	%	110	127	105	109

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	103	118	104	106
13C8-PFOA (surr.)	1	%	107	115	101	108
13C5-PFNA (surr.)	1	%	109	124	105	105
13C6-PFDA (surr.)	1	%	104	118	106	111
13C2-PFUnDA (surr.)	1	%	108	116	109	114
13C2-PFDoDA (surr.)	1	%	117	121	111	117
13C2-PFTeDA (surr.)	1	%	146	160	133	137
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	%	107	113	102	107
D3-N-MeFOSA (surr.)	1	%	94	106	92	96
D5-N-EtFOSA (surr.)	1	%	101	104	90	93
D7-N-MeFOSE (surr.)	1	%	104	112	99	102
D9-N-EtFOSE (surr.)	1	%	103	116	99	105
D5-N-EtFOSAA (surr.)	1	%	121	145	135	142
D3-N-MeFOSAA (surr.)	1	%	113	134	128	127
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	5.0	[N09]8.3
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	114	113	113	112
18O2-PFHxS (surr.)	1	%	102	109	104	100
13C8-PFOS (surr.)	1	%	109	109	100	111
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	%	85	118	70	85
13C2-6:2 FTSA (surr.)	1	%	111	130	105	98
13C2-8:2 FTSA (surr.)	1	%	84	139	117	119
13C2-10:2 FTSA (surr.)	1	%	99	120	120	118

Client Sample ID			QC101_20201112	LP-TP05-0.4	LP-TP07-0.1	LP-TP07-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27428	S20-No27429	S20-No27430	S20-No27431
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	5	8.3
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	5	8.3
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	5	8.3
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			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 200
TRH C10-C14	20	mg/kg	< 20	< 1000
TRH C15-C28	50	mg/kg	270	4500
TRH C29-C36	50	mg/kg	280	3600
TRH C10-C36 (Total)	50	mg/kg	550	8100
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 1
Toluene	0.1	mg/kg	< 0.1	< 1
Ethylbenzene	0.1	mg/kg	< 0.1	< 1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 2
o-Xylene	0.1	mg/kg	< 0.1	< 1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 3
4-Bromofluorobenzene (surr.)	1	%	130	140
Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 5
Allyl chloride	0.5	mg/kg	< 0.5	< 5

Client Sample ID			LP-TP06-0.2	R16LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Volatile Organics				
Benzene	0.1	mg/kg	< 0.1	< 1
Bromobenzene	0.5	mg/kg	< 0.5	< 5
Bromochloromethane	0.5	mg/kg	< 0.5	< 5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 5
Bromoform	0.5	mg/kg	< 0.5	< 5
Bromomethane	0.5	mg/kg	< 0.5	< 5
Carbon disulfide	0.5	mg/kg	< 0.5	< 5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 5
Chlorobenzene	0.5	mg/kg	< 0.5	< 5
Chloroethane	0.5	mg/kg	< 0.5	< 5
Chloroform	0.5	mg/kg	< 0.5	< 5
Chloromethane	0.5	mg/kg	< 0.5	< 5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 5
Dibromomethane	0.5	mg/kg	< 0.5	< 5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 5
Ethylbenzene	0.1	mg/kg	< 0.1	< 1
Iodomethane	0.5	mg/kg	< 0.5	< 5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 2
Methylene Chloride	0.5	mg/kg	< 0.5	< 5
o-Xylene	0.1	mg/kg	< 0.1	< 1
Styrene	0.5	mg/kg	< 0.5	< 5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 5
Toluene	0.1	mg/kg	< 0.1	< 1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 5
Trichloroethene	0.5	mg/kg	< 0.5	< 5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 5
Vinyl chloride	0.5	mg/kg	< 0.5	< 5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 3
Total MAH*	0.5	mg/kg	< 0.5	< 5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 5
4-Bromofluorobenzene (surr.)	1	%	130	140
Toluene-d8 (surr.)	1	%	93	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 5
TRH C6-C10	20	mg/kg	< 20	< 200
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 200
TRH >C10-C16	50	mg/kg	< 50	< 2500
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 2500
TRH >C16-C34	100	mg/kg	450	6800
TRH >C34-C40	100	mg/kg	250	< 5000
TRH >C10-C40 (total)*	100	mg/kg	700	6800

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	7.7	120
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	7.7	120
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	7.7	120
Acenaphthene	0.5	mg/kg	< 0.5	2.6
Acenaphthylene	0.5	mg/kg	< 0.5	0.9
Anthracene	0.5	mg/kg	< 0.5	9.0
Benz(a)anthracene	0.5	mg/kg	2.3	47
Benzo(a)pyrene	0.5	mg/kg	5.4	84
Benzo(b&j)fluoranthene N07	0.5	mg/kg	4.2	67
Benzo(g.h.i)perylene	0.5	mg/kg	5.0	62
Benzo(k)fluoranthene	0.5	mg/kg	5.2	80
Chrysene	0.5	mg/kg	2.3	44
Dibenz(a.h)anthracene	0.5	mg/kg	0.8	12
Fluoranthene	0.5	mg/kg	3.7	96
Fluorene	0.5	mg/kg	< 0.5	0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	2.7	36
Naphthalene	0.5	mg/kg	< 0.5	0.9
Phenanthrene	0.5	mg/kg	< 0.5	19
Pyrene	0.5	mg/kg	6.1	130
Total PAH*	0.5	mg/kg	37.7	690.9
2-Fluorobiphenyl (surr.)	1	%	85	88
p-Terphenyl-d14 (surr.)	1	%	97	109
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.5
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.5
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.5
a-BHC	0.05	mg/kg	< 0.05	< 0.5
Aldrin	0.05	mg/kg	< 0.05	< 0.5
b-BHC	0.05	mg/kg	< 0.05	< 0.5
d-BHC	0.05	mg/kg	< 0.05	< 0.5
Dieldrin	0.05	mg/kg	< 0.05	< 0.5
Endosulfan I	0.05	mg/kg	< 0.05	< 0.5
Endosulfan II	0.05	mg/kg	< 0.05	< 0.5
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.5
Endrin	0.05	mg/kg	< 0.05	< 0.5
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.5
Endrin ketone	0.05	mg/kg	< 0.05	< 0.5
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.5
Heptachlor	0.05	mg/kg	< 0.05	< 0.5
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.5
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.5
Methoxychlor	0.2	mg/kg	< 0.2	< 0.5
Toxaphene	0.1	mg/kg	< 0.1	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 1
Dibutylchlorendate (surr.)	1	%	88	66
Tetrachloro-m-xylene (surr.)	1	%	85	81

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 2
Bolstar	0.2	mg/kg	< 0.2	< 2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 2
Coumaphos	2	mg/kg	< 2	< 20
Demeton-S	0.2	mg/kg	< 0.2	< 2
Demeton-O	0.2	mg/kg	< 0.2	< 2
Diazinon	0.2	mg/kg	< 0.2	< 2
Dichlorvos	0.2	mg/kg	< 0.2	< 2
Dimethoate	0.2	mg/kg	< 0.2	< 2
Disulfoton	0.2	mg/kg	< 0.2	< 2
EPN	0.2	mg/kg	< 0.2	< 2
Ethion	0.2	mg/kg	< 0.2	< 2
Ethoprop	0.2	mg/kg	< 0.2	< 2
Ethyl parathion	0.2	mg/kg	< 0.2	< 2
Fenitrothion	0.2	mg/kg	< 0.2	< 2
Fensulfothion	0.2	mg/kg	< 0.2	< 2
Fenthion	0.2	mg/kg	< 0.2	< 2
Malathion	0.2	mg/kg	< 0.2	< 2
Merphos	0.2	mg/kg	< 0.2	< 2
Methyl parathion	0.2	mg/kg	< 0.2	< 2
Mevinphos	0.2	mg/kg	< 0.2	< 2
Monocrotophos	2	mg/kg	< 2	< 20
Naled	0.2	mg/kg	< 0.2	< 2
Omethoate	2	mg/kg	< 2	< 20
Phorate	0.2	mg/kg	< 0.2	< 2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 2
Pyrazophos	0.2	mg/kg	< 0.2	< 2
Ronnel	0.2	mg/kg	< 0.2	< 2
Terbufos	0.2	mg/kg	< 0.2	< 2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 2
Tokuthion	0.2	mg/kg	< 0.2	< 2
Trichloronate	0.2	mg/kg	< 0.2	< 2
Triphenylphosphate (surr.)	1	%	87	88
Phenols (Halogenated)				
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Phenols (non-Halogenated)				
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 50
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 20
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 20
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 20
Dinoseb	20	mg/kg	< 20	< 50
Phenol	0.5	mg/kg	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 50
Phenol-d6 (surr.)	1	%	59	64
Semivolatile Organics				
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 20
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	7.7	120
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	7.7	120
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	7.7	120
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 20
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Semivolatile Organics				
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 20
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	2.6
Acenaphthylene	0.5	mg/kg	< 0.5	0.9
Acetophenone	0.5	mg/kg	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	9.0
b-BHC	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	2.3	47
Benzo(a)pyrene	0.5	mg/kg	5.4	84
Benzo(b&j)fluoranthene N07	0.5	mg/kg	4.2	67
Benzo(g.h.i)perylene	0.5	mg/kg	5.0	62
Benzo(k)fluoranthene	0.5	mg/kg	5.2	80
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	2.3	44
d-BHC	0.5	mg/kg	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	0.8	12
Dibenz(a.j)acridine	0.5	mg/kg	0.7	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	3.7	96
Fluorene	0.5	mg/kg	< 0.5	0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Semivolatile Organics				
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	2.7	36
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	0.9
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	19
Phenol	0.5	mg/kg	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	6.1	130
Trifluralin	0.5	mg/kg	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	59	64
Nitrobenzene-d5 (surr.)	1	%	76	76
2-Fluorobiphenyl (surr.)	1	%	85	88
2.4.6-Tribromophenol (surr.)	1	%	INT	INT
Heavy Metals				
Arsenic	2	mg/kg	< 2	3.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	6.1	12
Copper	5	mg/kg	23	48
Lead	5	mg/kg	13	15
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	6.1	25
Zinc	5	mg/kg	35	41
% Moisture	1	%	5.2	5.5
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
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	%	80	82
13C5-PFPeA (surr.)	1	%	98	105
13C5-PFHxA (surr.)	1	%	109	119

Client Sample ID			LP-TP06-0.2	[R16]LP-TP06-0.25
Sample Matrix			Soil	Soil
Eurofins Sample No.			S20-No27432	S20-No27433
Date Sampled			Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		
Perfluoroalkyl carboxylic acids (PFCAs)				
13C4-PFHpA (surr.)	1	%	102	119
13C8-PFOA (surr.)	1	%	102	120
13C5-PFNA (surr.)	1	%	104	108
13C6-PFDA (surr.)	1	%	109	111
13C2-PFUnDA (surr.)	1	%	102	99
13C2-PFDoDA (surr.)	1	%	108	112
13C2-PFTeDA (surr.)	1	%	134	140
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	%	96	104
D3-N-MeFOSA (surr.)	1	%	79	72
D5-N-EtFOSA (surr.)	1	%	80	65
D7-N-MeFOSE (surr.)	1	%	94	90
D9-N-EtFOSE (surr.)	1	%	94	85
D5-N-EtFOSAA (surr.)	1	%	186	INT
D3-N-MeFOSAA (surr.)	1	%	170	INT
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	%	101	112
18O2-PFHxS (surr.)	1	%	97	103
13C8-PFOS (surr.)	1	%	95	100
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	%	102	INT
13C2-6:2 FTSA (surr.)	1	%	124	INT
13C2-8:2 FTSA (surr.)	1	%	137	INT
13C2-10:2 FTSA (surr.)	1	%	177	INT

Client Sample ID			LP-TP06-0.2	R16 LP-TP06-0.25
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S20-No27432**	**S20-No27433**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit		
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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 19, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 19, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 19, 2020	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Organochlorine Pesticides	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
% Moisture	Sydney	Nov 17, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 17, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 17, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 20, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 20, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
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Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC501_20201112	Nov 12, 2020		Water	S20-No27421		X		X		X	X	
2	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No27422								X
3	QC301_20201112 (TRIP BLANK)	Nov 12, 2020		Water	S20-No27423					X			
4	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No27424		X	X	X		X	X	
5	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No27425		X	X	X		X	X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No27426		X	X	X		X	X	

eurofins | Environment Testing

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
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Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No27427	X	X	X	X		X	X	
8	QC101_20201112	Nov 12, 2020		Soil	S20-No27428	X	X	X	X		X	X	
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No27429	X	X	X	X		X	X	
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No27430	X	X	X	X		X	X	
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No27431	X	X	X	X		X	X	
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No27432	X	X	X	X		X	X	
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No27433	X	X	X	X		X	X	
Test Counts						7	11	10	11	1	11	11	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trimethylbenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Butanone (MEK)	mg/kg	< 0.5			0.5	Pass	
2-Propanone (Acetone)	mg/kg	< 0.5			0.5	Pass	
4-Chlorotoluene	mg/kg	< 0.5			0.5	Pass	
4-Methyl-2-pentanone (MIBK)	mg/kg	< 0.5			0.5	Pass	
Allyl chloride	mg/kg	< 0.5			0.5	Pass	
Bromobenzene	mg/kg	< 0.5			0.5	Pass	
Bromochloromethane	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon disulfide	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroethane	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	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	
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							
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
1-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.4-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.3.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2.4.5-Tetrachlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3.5-Trichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
2-Chloronaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Methylnaphthalene	mg/kg	< 0.5			0.5	Pass	
2-Naphthylamine	mg/kg	< 0.5			0.5	Pass	
2-Nitroaniline	mg/kg	< 1			1	Pass	
2-Picoline	mg/kg	< 0.5			0.5	Pass	
2.3.4.6-Tetrachlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrotoluene	mg/kg	< 0.5			0.5	Pass	
2.6-Dinitrotoluene	mg/kg	< 1			1	Pass	
3-Methylcholanthrene	mg/kg	< 0.5			0.5	Pass	
3.3'-Dichlorobenzidine	mg/kg	< 0.5			0.5	Pass	
4-Aminobiphenyl	mg/kg	< 0.5			0.5	Pass	
4-Bromophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4-Chlorophenyl phenyl ether	mg/kg	< 0.5			0.5	Pass	
4.4'-DDD	mg/kg	< 0.5			0.5	Pass	
4.4'-DDE	mg/kg	< 0.5			0.5	Pass	
4.4'-DDT	mg/kg	< 1			1	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
a-BHC	mg/kg	< 0.5			0.5	Pass	
Acetophenone	mg/kg	< 0.5			0.5	Pass	
Aldrin	mg/kg	< 0.5			0.5	Pass	
Aniline	mg/kg	< 0.5			0.5	Pass	
b-BHC	mg/kg	< 0.5			0.5	Pass	
Benzyl chloride	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroethoxy)methane	mg/kg	< 0.5			0.5	Pass	
Bis(2-chloroisopropyl)ether	mg/kg	< 0.5			0.5	Pass	
Bis(2-ethylhexyl)phthalate	mg/kg	< 5			5	Pass	
Butyl benzyl phthalate	mg/kg	< 0.5			0.5	Pass	
d-BHC	mg/kg	< 0.5			0.5	Pass	
Di-n-butyl phthalate	mg/kg	< 0.5			0.5	Pass	
Di-n-octyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.j)acridine	mg/kg	< 0.5			0.5	Pass	
Dibenzofuran	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/kg	< 0.5			0.5	Pass	
Diethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethyl phthalate	mg/kg	< 0.5			0.5	Pass	
Dimethylaminoazobenzene	mg/kg	< 0.5			0.5	Pass	
Diphenylamine	mg/kg	< 0.5			0.5	Pass	
Endosulfan I	mg/kg	< 0.5			0.5	Pass	
Endosulfan II	mg/kg	< 0.5			0.5	Pass	
Endosulfan sulphate	mg/kg	< 0.5			0.5	Pass	
Endrin	mg/kg	< 0.5			0.5	Pass	
Endrin aldehyde	mg/kg	< 0.5			0.5	Pass	
Endrin ketone	mg/kg	< 0.5			0.5	Pass	
g-BHC (Lindane)	mg/kg	< 0.5			0.5	Pass	
Heptachlor	mg/kg	< 0.5			0.5	Pass	
Heptachlor epoxide	mg/kg	< 0.5			0.5	Pass	
Hexachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Hexachlorobutadiene	mg/kg	< 0.5			0.5	Pass	
Hexachlorocyclopentadiene	mg/kg	< 1			1	Pass	
Hexachloroethane	mg/kg	< 0.5			0.5	Pass	
Methoxychlor	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodibutylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosodipropylamine	mg/kg	< 0.5			0.5	Pass	
N-Nitrosopiperidine	mg/kg	< 0.5			0.5	Pass	
Nitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachlorobenzene	mg/kg	< 0.5			0.5	Pass	
Pentachloronitrobenzene	mg/kg	< 0.5			0.5	Pass	
Pronamide	mg/kg	< 0.5			0.5	Pass	
Trifluralin	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	%	81			70-130	Pass	
TRH C10-C14	%	85			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	91			70-130	Pass	
Ethylbenzene	%	75			70-130	Pass	
m&p-Xylenes	%	105			70-130	Pass	
o-Xylene	%	79			70-130	Pass	
Xylenes - Total*	%	70			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	101			70-130	Pass	
1.2-Dichlorobenzene	%	105			70-130	Pass	
1.2-Dichloroethane	%	99			70-130	Pass	
Trichloroethene	%	87			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	78			70-130	Pass	
TRH >C10-C16	%	84			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	120			70-130	Pass	
Acenaphthylene	%	124			70-130	Pass	
Anthracene	%	119			70-130	Pass	
Benz(a)anthracene	%	77			70-130	Pass	
Benzo(a)pyrene	%	123			70-130	Pass	
Benzo(b&j)fluoranthene	%	126			70-130	Pass	
Benzo(g.h.i)perylene	%	81			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	90			70-130	Pass	
Dibenz(a.h)anthracene	%	79			70-130	Pass	
Fluoranthene	%	107			70-130	Pass	
Fluorene	%	126			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	77			70-130	Pass	
Naphthalene	%	124			70-130	Pass	
Phenanthrene	%	113			70-130	Pass	
Pyrene	%	91			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	78			70-130	Pass	
4.4'-DDD	%	112			70-130	Pass	
4.4'-DDE	%	126			70-130	Pass	
4.4'-DDT	%	91			70-130	Pass	
a-BHC	%	90			70-130	Pass	
Aldrin	%	124			70-130	Pass	
b-BHC	%	96			70-130	Pass	
d-BHC	%	91			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	128			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	118			70-130	Pass	
Endrin	%	122			70-130	Pass	
Endrin aldehyde	%	111			70-130	Pass	
Endrin ketone	%	84			70-130	Pass	
g-BHC (Lindane)	%	115			70-130	Pass	
Heptachlor	%	75			70-130	Pass	
Heptachlor epoxide	%	118			70-130	Pass	
Hexachlorobenzene	%	71			70-130	Pass	
Methoxychlor	%	87			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	102			70-130	Pass	
Dimethoate	%	104			70-130	Pass	
Ethion	%	73			70-130	Pass	
Fenitrothion	%	118			70-130	Pass	
Methyl parathion	%	126			70-130	Pass	
Mevinphos	%	127			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	97			30-130	Pass	
2.4-Dichlorophenol	%	111			30-130	Pass	
2.4.5-Trichlorophenol	%	93			30-130	Pass	
2.4.6-Trichlorophenol	%	103			30-130	Pass	
2.6-Dichlorophenol	%	109			30-130	Pass	
4-Chloro-3-methylphenol	%	108			30-130	Pass	
Pentachlorophenol	%	91			30-130	Pass	
Tetrachlorophenols - Total	%	95			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	92			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	74			30-130	Pass	
2-Methylphenol (o-Cresol)	%	82			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	%	126			30-130	Pass	
2.4-Dimethylphenol	%	95			30-130	Pass	
2.4-Dinitrophenol	%	97			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	93			30-130	Pass	
4-Nitrophenol	%	103			30-130	Pass	
Dinoseb	%	70			30-130	Pass	
Phenol	%	91			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	81			70-130	Pass	
1.3-Dichlorobenzene	%	89			70-130	Pass	
1.3.5-Trichlorobenzene	%	80			70-130	Pass	
1.4-Dichlorobenzene	%	83			70-130	Pass	
2.4-Dinitrotoluene	%	78			70-130	Pass	
N-Nitrosodipropylamine	%	77			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	98			80-120	Pass	
Cadmium	%	90			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	95			80-120	Pass	
Mercury	%	92			80-120	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	96			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	98			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	101			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	101			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	101			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	95			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	98			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	108			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	104			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	92			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	101			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	103			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	90			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	75			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	95			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)			%	90			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)			%	93			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	94			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	94			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	107			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	95			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 C10-C14	S20-No27333	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No27333	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-No31832	NCP	%	130			70-130	Pass	
Dimethoate	S20-No31474	NCP	%	87			70-130	Pass	
Ethion	S20-No31832	NCP	%	92			70-130	Pass	
Fenitrothion	S20-No31832	NCP	%	122			70-130	Pass	
Methyl parathion	S20-No31832	NCP	%	120			70-130	Pass	
Mevinphos	S20-No31474	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No31474	NCP	%	90			30-130	Pass	
2.4-Dichlorophenol	S20-No31474	NCP	%	97			30-130	Pass	
2.4.5-Trichlorophenol	S20-No31474	NCP	%	75			30-130	Pass	
2.4.6-Trichlorophenol	S20-No31474	NCP	%	83			30-130	Pass	
2.6-Dichlorophenol	S20-No31474	NCP	%	91			30-130	Pass	
4-Chloro-3-methylphenol	S20-No31474	NCP	%	100			30-130	Pass	
Pentachlorophenol	S20-No31474	NCP	%	118			30-130	Pass	
Tetrachlorophenols - Total	S20-No31474	NCP	%	91			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methylphenol (o-Cresol)	S20-No31474	NCP	%	79			30-130	Pass	
2-Nitrophenol	S20-No20023	NCP	%	130			30-130	Pass	
2.4-Dimethylphenol	S20-No31474	NCP	%	93			30-130	Pass	
2.4-Dinitrophenol	S20-No31474	NCP	%	96			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No31474	NCP	%	89			30-130	Pass	
Phenol	S20-No31474	NCP	%	87			30-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
2.3.4.6-Tetrachlorophenol	S20-No20023	NCP	%	122			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No31864	NCP	%	86			75-125	Pass	
Cadmium	S20-No31864	NCP	%	86			75-125	Pass	
Chromium	S20-No25073	NCP	%	94			75-125	Pass	
Copper	S20-No31864	NCP	%	90			75-125	Pass	
Lead	S20-No25073	NCP	%	103			75-125	Pass	
Mercury	S20-No31864	NCP	%	87			75-125	Pass	
Nickel	S20-No31864	NCP	%	84			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	S20-No31864	NCP	%	113			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No33437	NCP	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No33437	NCP	%	99			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No33437	NCP	%	100			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No33437	NCP	%	97			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No33437	NCP	%	99			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No33437	NCP	%	104			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No33437	NCP	%	102			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No33437	NCP	%	112			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No33437	NCP	%	100			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No33437	NCP	%	109			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No33437	NCP	%	120			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No33437	NCP	%	102			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No33437	NCP	%	104			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No33437	NCP	%	106			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No33437	NCP	%	92			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No33437	NCP	%	102			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No33437	NCP	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No33437	NCP	%	95			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No33437	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No33437	NCP	%	94			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No33437	NCP	%	93			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No33437	NCP	%	79			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No33437	NCP	%	98			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No33437	NCP	%	90			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No33437	NCP	%	97			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No33437	NCP	%	99			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No33437	NCP	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No33437	NCP	%	131			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No33437	NCP	%	123			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No33437	NCP	%	97			50-150	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No31832	NCP	%	101			70-130	Pass	
Acenaphthylene	S20-No31832	NCP	%	109			70-130	Pass	
Anthracene	S20-No31832	NCP	%	106			70-130	Pass	
Benz(a)anthracene	S20-No31832	NCP	%	90			70-130	Pass	
Benzo(a)pyrene	S20-No31832	NCP	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No31832	NCP	%	108			70-130	Pass	
Benzo(g.h.i)perylene	S20-No31832	NCP	%	118			70-130	Pass	
Benzo(k)fluoranthene	S20-No31832	NCP	%	120			70-130	Pass	
Chrysene	S20-No31832	NCP	%	87			70-130	Pass	
Dibenz(a.h)anthracene	S20-No31832	NCP	%	110			70-130	Pass	
Fluoranthene	S20-No31832	NCP	%	95			70-130	Pass	
Fluorene	S20-No31832	NCP	%	109			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No31832	NCP	%	94			70-130	Pass	
Naphthalene	S20-No31832	NCP	%	105			70-130	Pass	
Phenanthrene	S20-No31832	NCP	%	101			70-130	Pass	
Pyrene	S20-No31832	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-No31474	NCP	%	91			70-130	Pass	
4.4'-DDE	S20-No31474	NCP	%	87			70-130	Pass	
4.4'-DDT	S20-No31474	NCP	%	73			70-130	Pass	
Aldrin	S20-No31474	NCP	%	82			70-130	Pass	
Endosulfan I	S20-No31474	NCP	%	84			70-130	Pass	
Endrin	S20-No31474	NCP	%	71			70-130	Pass	
Endrin ketone	S20-No31474	NCP	%	88			70-130	Pass	
g-BHC (Lindane)	S20-No31474	NCP	%	74			70-130	Pass	
Heptachlor epoxide	S20-No31474	NCP	%	70			70-130	Pass	
Hexachlorobenzene	S20-No31474	NCP	%	105			70-130	Pass	
Methoxychlor	S20-No31474	NCP	%	81			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-No27431	CP	%	128			70-130	Pass	
Toluene	S20-No27431	CP	%	113			70-130	Pass	
Ethylbenzene	S20-No27431	CP	%	98			70-130	Pass	
m&p-Xylenes	S20-No27431	CP	%	91			70-130	Pass	
o-Xylene	S20-No27431	CP	%	104			70-130	Pass	
Xylenes - Total*	S20-No27431	CP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S20-No27431	CP	%	117			70-130	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	S20-No34401	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S20-No27297	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No27297	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-No27297	NCP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No34401	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No34401	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No34401	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No34401	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No34401	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No34401	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S20-No27815	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No34401	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No34401	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S20-No27297	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No27297	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No27297	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No34522	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No34522	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No34522	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No34522	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No27817	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Demeton-O	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No27817	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-No27817	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S20-No27817	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-No27817	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-No27817	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-No27817	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S20-No27817	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No27817	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S20-No27817	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S20-No27817	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S20-No27817	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
g-BHC (Lindane)	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S20-No27817	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S20-No27817	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No27330	NCP	%	11	11	1.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No33436	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No33436	NCP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No33436	NCP	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)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No33436	NCP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No33436	NCP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No27431	CP	mg/kg	2.9	2.8	4.0	30%	Pass	
Cadmium	S20-No27431	CP	mg/kg	0.8	0.6	22	30%	Pass	
Chromium	S20-No27431	CP	mg/kg	18	17	10	30%	Pass	
Copper	S20-No27431	CP	mg/kg	150	120	22	30%	Pass	
Lead	S20-No27431	CP	mg/kg	220	150	34	30%	Fail	Q15
Mercury	S20-No27431	CP	mg/kg	0.1	0.1	2.0	30%	Pass	
Nickel	S20-No27431	CP	mg/kg	13	13	<1	30%	Pass	
Zinc	S20-No27431	CP	mg/kg	930	750	21	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N09	Quantification of linear and branched isomers has been conducted as a single total response using the relative response factor for the corresponding linear/branched standard.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.
R16	The LORs have been raised due to the high concentration of one or more analytes

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **757204-W**
Project name ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE
Received Date Nov 16, 2020

Client Sample ID			**QC501_20201112**	**QC401_20201112 (TRIP SPIKE)**	**QC301_20201112 (TRIP BLANK)**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-
TRH C15-C28	0.1	mg/L	< 0.1	-	-
TRH C29-C36	0.1	mg/L	< 0.1	-	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	136	-	137
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	-	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	-	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	-	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	-	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	-	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	-	-
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	-	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	-	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	-	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	-	-
4-Chlorotoluene	0.001	mg/L	< 0.001	-	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	-	-
Allyl chloride	0.001	mg/L	< 0.001	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Volatile Organics					
Benzene	0.001	mg/L	< 0.001	-	-
Bromobenzene	0.001	mg/L	< 0.001	-	-
Bromochloromethane	0.001	mg/L	< 0.001	-	-
Bromodichloromethane	0.001	mg/L	< 0.001	-	-
Bromoform	0.001	mg/L	< 0.001	-	-
Bromomethane	0.001	mg/L	< 0.001	-	-
Carbon disulfide	0.001	mg/L	< 0.001	-	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	-	-
Chlorobenzene	0.001	mg/L	< 0.001	-	-
Chloroethane	0.001	mg/L	< 0.001	-	-
Chloroform	0.005	mg/L	< 0.005	-	-
Chloromethane	0.001	mg/L	< 0.001	-	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Dibromochloromethane	0.001	mg/L	< 0.001	-	-
Dibromomethane	0.001	mg/L	< 0.001	-	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	-	-
Ethylbenzene	0.001	mg/L	< 0.001	-	-
Iodomethane	0.001	mg/L	< 0.001	-	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	-	-
m&p-Xylenes	0.002	mg/L	< 0.002	-	-
Methylene Chloride	0.001	mg/L	< 0.001	-	-
o-Xylene	0.001	mg/L	< 0.001	-	-
Styrene	0.001	mg/L	< 0.001	-	-
Tetrachloroethene	0.001	mg/L	< 0.001	-	-
Toluene	0.001	mg/L	< 0.001	-	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	-	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	-	-
Trichloroethene	0.001	mg/L	< 0.001	-	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	-	-
Vinyl chloride	0.001	mg/L	< 0.001	-	-
Xylenes - Total*	0.003	mg/L	< 0.003	-	-
Total MAH*	0.003	mg/L	< 0.003	-	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	-	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	-	-
4-Bromofluorobenzene (surr.)	1	%	136	-	-
Toluene-d8 (surr.)	1	%	95	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-
TRH >C16-C34	0.1	mg/L	< 0.1	-	-
TRH >C34-C40	0.1	mg/L	< 0.1	-	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Total PAH*	0.001	mg/L	< 0.001	-	-
2-Fluorobiphenyl (surr.)	1	%	82	-	-
p-Terphenyl-d14 (surr.)	1	%	128	-	-
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	< 0.002	-	-
4.4'-DDD	0.0001	mg/L	< 0.0001	-	-
4.4'-DDE	0.0001	mg/L	< 0.0001	-	-
4.4'-DDT	0.0001	mg/L	< 0.0001	-	-
a-BHC	0.0001	mg/L	< 0.0001	-	-
Aldrin	0.0001	mg/L	< 0.0001	-	-
b-BHC	0.0001	mg/L	< 0.0001	-	-
d-BHC	0.0001	mg/L	< 0.0001	-	-
Dieldrin	0.0001	mg/L	< 0.0001	-	-
Endosulfan I	0.0001	mg/L	< 0.0001	-	-
Endosulfan II	0.0001	mg/L	< 0.0001	-	-
Endosulfan sulphate	0.0001	mg/L	< 0.0001	-	-
Endrin	0.0001	mg/L	< 0.0001	-	-
Endrin aldehyde	0.0001	mg/L	< 0.0001	-	-
Endrin ketone	0.0001	mg/L	< 0.0001	-	-
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	-	-
Heptachlor	0.0001	mg/L	< 0.0001	-	-
Heptachlor epoxide	0.0001	mg/L	< 0.0001	-	-
Hexachlorobenzene	0.0001	mg/L	< 0.0001	-	-
Methoxychlor	0.0002	mg/L	< 0.0002	-	-
Toxaphene	0.001	mg/L	< 0.001	-	-
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002	-	-
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002	-	-
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002	-	-
Dibutylchlorendate (surr.)	1	%	98	-	-
Tetrachloro-m-xylene (surr.)	1	%	80	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	< 0.002	-	-
Bolstar	0.002	mg/L	< 0.002	-	-
Chlorfenvinphos	0.002	mg/L	< 0.002	-	-
Chlorpyrifos	0.02	mg/L	< 0.02	-	-
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	-	-
Coumaphos	0.02	mg/L	< 0.02	-	-
Demeton-S	0.02	mg/L	< 0.02	-	-
Demeton-O	0.002	mg/L	< 0.002	-	-
Diazinon	0.002	mg/L	< 0.002	-	-
Dichlorvos	0.002	mg/L	< 0.002	-	-
Dimethoate	0.002	mg/L	< 0.002	-	-
Disulfoton	0.002	mg/L	< 0.002	-	-
EPN	0.002	mg/L	< 0.002	-	-
Ethion	0.002	mg/L	< 0.002	-	-
Ethoprop	0.002	mg/L	< 0.002	-	-
Ethyl parathion	0.002	mg/L	< 0.002	-	-
Fenitrothion	0.002	mg/L	< 0.002	-	-
Fensulfothion	0.002	mg/L	< 0.002	-	-
Fenthion	0.002	mg/L	< 0.002	-	-
Malathion	0.002	mg/L	< 0.002	-	-
Merphos	0.002	mg/L	< 0.002	-	-
Methyl parathion	0.002	mg/L	< 0.002	-	-
Mevinphos	0.002	mg/L	< 0.002	-	-
Monocrotophos	0.002	mg/L	< 0.002	-	-
Naled	0.002	mg/L	< 0.002	-	-
Omethoate	0.002	mg/L	< 0.002	-	-
Phorate	0.002	mg/L	< 0.002	-	-
Pirimiphos-methyl	0.02	mg/L	< 0.02	-	-
Pyrazophos	0.002	mg/L	< 0.002	-	-
Ronnel	0.002	mg/L	< 0.002	-	-
Terbufos	0.002	mg/L	< 0.002	-	-
Tetrachlorvinphos	0.002	mg/L	< 0.002	-	-
Tokuthion	0.002	mg/L	< 0.002	-	-
Trichloronate	0.002	mg/L	< 0.002	-	-
Triphenylphosphate (surr.)	1	%	110	-	-
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	< 0.003	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	-	-
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	-	-
Total Halogenated Phenol*	0.01	mg/L	< 0.01	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	-	-
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	-	-
Dinoseb	0.1	mg/L	< 0.1	-	-
Phenol	0.003	mg/L	< 0.003	-	-
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	-	-
Phenol-d6 (surr.)	1	%	63	-	-
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	-	-
1-Chloronaphthalene	0.005	mg/L	< 0.005	-	-
1-Naphthylamine	0.002	mg/L	< 0.002	-	-
1.2-Dichlorobenzene	0.002	mg/L	< 0.002	-	-
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	-	-
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	-	-
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	-	-
1.2.4-Trichlorobenzene	0.002	mg/L	< 0.002	-	-
1.2.4.5-Tetrachlorobenzene	0.002	mg/L	< 0.002	-	-
1.3-Dichlorobenzene	0.002	mg/L	< 0.002	-	-
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	-	-
1.4-Dichlorobenzene	0.002	mg/L	< 0.002	-	-
2-Chloronaphthalene	0.002	mg/L	< 0.002	-	-
2-Chlorophenol	0.003	mg/L	< 0.003	-	-
2-Methylnaphthalene	0.002	mg/L	< 0.002	-	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	-	-
2-Naphthylamine	0.002	mg/L	< 0.002	-	-
2-Nitroaniline	0.004	mg/L	< 0.004	-	-
2-Nitrophenol	0.01	mg/L	< 0.01	-	-
2-Picoline	0.005	mg/L	< 0.005	-	-
2.3.4.6-Tetrachlorophenol	0.002	mg/L	< 0.002	-	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	-	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	-	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	-	-
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	-	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	-	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	-	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	-	-
2.6-Dinitrotoluene	0.004	mg/L	< 0.004	-	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	-	-
3-Methylcholanthrene	0.002	mg/L	< 0.002	-	-
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	-	-
4-Aminobiphenyl	0.002	mg/L	< 0.002	-	-
4-Bromophenyl phenyl ether	0.002	mg/L	< 0.002	-	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27421	S20-No27422	S20-No27423
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
4-Chlorophenyl phenyl ether	0.002	mg/L	< 0.002	-	-
4-Nitrophenol	0.03	mg/L	< 0.03	-	-
4.4'-DDD	0.002	mg/L	< 0.002	-	-
4.4'-DDE	0.002	mg/L	< 0.002	-	-
4.4'-DDT	0.004	mg/L	< 0.004	-	-
7.12-Dimethylbenz(a)anthracene	0.002	mg/L	< 0.002	-	-
a-BHC	0.002	mg/L	< 0.002	-	-
Acenaphthene	0.001	mg/L	< 0.001	-	-
Acenaphthylene	0.001	mg/L	< 0.001	-	-
Acetophenone	0.002	mg/L	< 0.002	-	-
Aldrin	0.002	mg/L	< 0.002	-	-
Aniline	0.002	mg/L	< 0.002	-	-
Anthracene	0.001	mg/L	< 0.001	-	-
b-BHC	0.002	mg/L	< 0.002	-	-
Benz(a)anthracene	0.001	mg/L	< 0.001	-	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	-	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	-	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	-	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	-	-
Benzyl chloride	0.005	mg/L	< 0.005	-	-
Bis(2-chloroethoxy)methane	0.002	mg/L	< 0.002	-	-
Bis(2-chloroisopropyl)ether	0.002	mg/L	< 0.002	-	-
Bis(2-ethylhexyl)phthalate	0.02	mg/L	< 0.02	-	-
Butyl benzyl phthalate	0.002	mg/L	< 0.002	-	-
Chrysene	0.001	mg/L	< 0.001	-	-
d-BHC	0.002	mg/L	< 0.002	-	-
Di-n-butyl phthalate	0.002	mg/L	< 0.002	-	-
Di-n-octyl phthalate	0.002	mg/L	< 0.002	-	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	-	-
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	-	-
Dibenzofuran	0.002	mg/L	< 0.002	-	-
Dieldrin	0.002	mg/L	< 0.002	-	-
Diethyl phthalate	0.002	mg/L	< 0.002	-	-
Dimethyl phthalate	0.002	mg/L	< 0.002	-	-
Dimethylaminoazobenzene	0.002	mg/L	< 0.002	-	-
Diphenylamine	0.002	mg/L	< 0.002	-	-
Endosulfan I	0.002	mg/L	< 0.002	-	-
Endosulfan II	0.002	mg/L	< 0.002	-	-
Endosulfan sulphate	0.002	mg/L	< 0.002	-	-
Endrin	0.002	mg/L	< 0.002	-	-
Endrin aldehyde	0.002	mg/L	< 0.002	-	-
Endrin ketone	0.002	mg/L	< 0.002	-	-
Fluoranthene	0.001	mg/L	< 0.001	-	-
Fluorene	0.001	mg/L	< 0.001	-	-
g-BHC (Lindane)	0.002	mg/L	< 0.002	-	-
Heptachlor	0.002	mg/L	< 0.002	-	-
Heptachlor epoxide	0.002	mg/L	< 0.002	-	-
Hexachlorobenzene	0.002	mg/L	< 0.002	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Semivolatile Organics					
Hexachlorobutadiene	0.002	mg/L	< 0.002	-	-
Hexachlorocyclopentadiene	0.004	mg/L	< 0.004	-	-
Hexachloroethane	0.002	mg/L	< 0.002	-	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	-	-
Methoxychlor	0.005	mg/L	< 0.005	-	-
N-Nitrosodibutylamine	0.002	mg/L	< 0.002	-	-
N-Nitrosodipropylamine	0.002	mg/L	< 0.002	-	-
N-Nitrosopiperidine	0.002	mg/L	< 0.002	-	-
Naphthalene	0.001	mg/L	< 0.001	-	-
Nitrobenzene	0.005	mg/L	< 0.005	-	-
Pentachlorobenzene	0.002	mg/L	< 0.002	-	-
Pentachloronitrobenzene	0.002	mg/L	< 0.002	-	-
Pentachlorophenol	0.01	mg/L	< 0.01	-	-
Phenanthrene	0.001	mg/L	< 0.001	-	-
Phenol	0.003	mg/L	< 0.003	-	-
Pronamide	0.005	mg/L	< 0.005	-	-
Pyrene	0.001	mg/L	< 0.001	-	-
Trifluralin	0.005	mg/L	< 0.005	-	-
Phenol-d6 (surr.)	1	%	63	-	-
Nitrobenzene-d5 (surr.)	1	%	96	-	-
2-Fluorobiphenyl (surr.)	1	%	82	-	-
2.4.6-Tribromophenol (surr.)	1	%	95	-	-
Heavy Metals					
Arsenic	0.001	mg/L	< 0.001	-	-
Cadmium	0.0002	mg/L	< 0.0002	-	-
Chromium	0.001	mg/L	< 0.001	-	-
Copper	0.001	mg/L	< 0.001	-	-
Lead	0.001	mg/L	< 0.001	-	-
Mercury	0.0001	mg/L	< 0.0001	-	-
Nickel	0.001	mg/L	< 0.001	-	-
Zinc	0.005	mg/L	< 0.005	-	-
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	-	-
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	-	-
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	-	-
13C4-PFBA (surr.)	1	%	65	-	-
13C5-PFPeA (surr.)	1	%	73	-	-
13C5-PFHxA (surr.)	1	%	68	-	-
13C4-PFHpA (surr.)	1	%	70	-	-
13C8-PFOA (surr.)	1	%	59	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C5-PFNA (surr.)	1	%	59	-	-
13C6-PFDA (surr.)	1	%	59	-	-
13C2-PFUnDA (surr.)	1	%	57	-	-
13C2-PFDoDA (surr.)	1	%	58	-	-
13C2-PFTeDA (surr.)	1	%	60	-	-
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	-	-
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	-	-
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	-	-
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	-	-
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	-	-
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	-	-
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	-	-
13C8-FOSA (surr.)	1	%	46	-	-
D3-N-MeFOSA (surr.)	1	%	80	-	-
D5-N-EtFOSA (surr.)	1	%	105	-	-
D7-N-MeFOSE (surr.)	1	%	33	-	-
D9-N-EtFOSE (surr.)	1	%	38	-	-
D5-N-EtFOSAA (surr.)	1	%	40	-	-
D3-N-MeFOSAA (surr.)	1	%	40	-	-
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	-	-
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	-	-
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	-	-
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	-	-
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	-	-
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	-	-
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	-	-
13C3-PFBS (surr.)	1	%	97	-	-
18O2-PFHxS (surr.)	1	%	82	-	-
13C8-PFOS (surr.)	1	%	90	-	-
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	< 0.01	-	-
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	-	-
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	-	-
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	-	-
13C2-4:2 FTSA (surr.)	1	%	50	-	-
13C2-6:2 FTSA (surr.)	1	%	53	-	-
13C2-8:2 FTSA (surr.)	1	%	63	-	-
13C2-10:2 FTSA (surr.)	1	%	76	-	-

Client Sample ID			QC501_20201112	QC401_20201112 (TRIP SPIKE)	QC301_20201112 (TRIP BLANK)
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27421**	**S20-No27422**	**S20-No27423**
Date Sampled			**Nov 12, 2020**	**Nov 12, 2020**	**Nov 12, 2020**
Test/Reference	LOR	Unit			
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	-	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	-	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	-	-
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	-	-
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	-	-
BTEX					
Benzene	1	%	-	110	-
Ethylbenzene	1	%	-	110	-
m&p-Xylenes	1	%	-	110	-
o-Xylene	1	%	-	100	-
Toluene	1	%	-	110	-
Xylenes - Total	1	%	-	100	-
4-Bromofluorobenzene (surr.)	1	%	-	137	-

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 17, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 17, 2020	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Organochlorine Pesticides	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

Order No.:
Report #: 757204
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	QC501_20201112	Nov 12, 2020		Water	S20-No27421		X		X		X	X	
2	QC401_20201112 (TRIP SPIKE)	Nov 12, 2020		Water	S20-No27422								X
3	QC301_20201112 (TRIP BLANK)	Nov 12, 2020		Water	S20-No27423					X			
4	LP-BH01-0.1	Nov 12, 2020		Soil	S20-No27424		X	X	X		X	X	
5	LP-TP10-0.1	Nov 12, 2020		Soil	S20-No27425		X	X	X		X	X	
6	LP-TP04-0.2	Nov 12, 2020		Soil	S20-No27426		X	X	X		X	X	

eurofins | Environment Testing

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Project Name: ADDITIONAL - KAMAY WHARF PROJECT LA PEROUSE

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Report #: 757204
Phone: 02 8584 8888
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Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271													
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
Mayfield Laboratory													
External Laboratory													
7	LP-TP05-0.2	Nov 12, 2020		Soil	S20-No27427	X	X	X	X		X	X	
8	QC101_20201112	Nov 12, 2020		Soil	S20-No27428	X	X	X	X		X	X	
9	LP-TP05-0.4	Nov 12, 2020		Soil	S20-No27429	X	X	X	X		X	X	
10	LP-TP07-0.1	Nov 12, 2020		Soil	S20-No27430	X	X	X	X		X	X	
11	LP-TP07-0.2	Nov 12, 2020		Soil	S20-No27431	X	X	X	X		X	X	
12	LP-TP06-0.2	Nov 12, 2020		Soil	S20-No27432	X	X	X	X		X	X	
13	LP-TP06-0.25	Nov 12, 2020		Soil	S20-No27433	X	X	X	X		X	X	
Test Counts						7	11	10	11	1	11	11	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.002			0.002	Pass	
1.2-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
2-Chloronaphthalene	mg/L	< 0.002			0.002	Pass	
2-Methylnaphthalene	mg/L	< 0.002			0.002	Pass	
2-Naphthylamine	mg/L	< 0.002			0.002	Pass	
2-Nitroaniline	mg/L	< 0.004			0.004	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.004			0.004	Pass	
3-Methylcholanthrene	mg/L	< 0.002			0.002	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.002			0.002	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.002			0.002	Pass	
4.4'-DDE	mg/L	< 0.002			0.002	Pass	
4.4'-DDT	mg/L	< 0.004			0.004	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.002			0.002	Pass	
Acetophenone	mg/L	< 0.002			0.002	Pass	
Aldrin	mg/L	< 0.002			0.002	Pass	
Aniline	mg/L	< 0.002			0.002	Pass	
b-BHC	mg/L	< 0.002			0.002	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.002			0.002	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.002			0.002	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.02			0.02	Pass	
Butyl benzyl phthalate	mg/L	< 0.002			0.002	Pass	
d-BHC	mg/L	< 0.002			0.002	Pass	
Di-n-butyl phthalate	mg/L	< 0.002			0.002	Pass	
Di-n-octyl phthalate	mg/L	< 0.002			0.002	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dieldrin	mg/L	< 0.002			0.002	Pass	
Diethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethylaminoazobenzene	mg/L	< 0.002			0.002	Pass	
Diphenylamine	mg/L	< 0.002			0.002	Pass	
Endosulfan I	mg/L	< 0.002			0.002	Pass	
Endosulfan II	mg/L	< 0.002			0.002	Pass	
Endosulfan sulphate	mg/L	< 0.002			0.002	Pass	
Endrin	mg/L	< 0.002			0.002	Pass	
Endrin aldehyde	mg/L	< 0.002			0.002	Pass	
Endrin ketone	mg/L	< 0.002			0.002	Pass	
g-BHC (Lindane)	mg/L	< 0.002			0.002	Pass	
Heptachlor	mg/L	< 0.002			0.002	Pass	
Heptachlor epoxide	mg/L	< 0.002			0.002	Pass	
Hexachlorobenzene	mg/L	< 0.002			0.002	Pass	
Hexachlorobutadiene	mg/L	< 0.002			0.002	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.004			0.004	Pass	
Hexachloroethane	mg/L	< 0.002			0.002	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosodipropylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosopiperidine	mg/L	< 0.002			0.002	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.002			0.002	Pass	
Pentachloronitrobenzene	mg/L	< 0.002			0.002	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	80			70-130	Pass	
TRH C10-C14	%	89			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	109			70-130	Pass	
Toluene	%	96			70-130	Pass	
Ethylbenzene	%	96			70-130	Pass	
m&p-Xylenes	%	103			70-130	Pass	
o-Xylene	%	108			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	126			70-130	Pass	
1.1.1-Trichloroethane	%	106			70-130	Pass	
1.2-Dichlorobenzene	%	104			70-130	Pass	
1.2-Dichloroethane	%	115			70-130	Pass	
Trichloroethene	%	91			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	94			70-130	Pass	
TRH C6-C10	%	77			70-130	Pass	
TRH >C10-C16	%	86			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	100			70-130	Pass	
Acenaphthylene	%	104			70-130	Pass	
Anthracene	%	75			70-130	Pass	
Benz(a)anthracene	%	100			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	%	95			70-130	Pass	
Benzo(g.h.i)perylene	%	99			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(k)fluoranthene	%	101			70-130	Pass	
Chrysene	%	116			70-130	Pass	
Dibenz(a.h)anthracene	%	104			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	104			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	104			70-130	Pass	
Naphthalene	%	129			70-130	Pass	
Phenanthrene	%	105			70-130	Pass	
Pyrene	%	98			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	84			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	70			70-130	Pass	
4.4'-DDT	%	104			70-130	Pass	
a-BHC	%	74			70-130	Pass	
Aldrin	%	127			70-130	Pass	
b-BHC	%	77			70-130	Pass	
d-BHC	%	80			70-130	Pass	
Dieldrin	%	97			70-130	Pass	
Endosulfan I	%	77			70-130	Pass	
Endosulfan II	%	110			70-130	Pass	
Endosulfan sulphate	%	99			70-130	Pass	
Endrin	%	83			70-130	Pass	
Endrin aldehyde	%	92			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	81			70-130	Pass	
Heptachlor	%	81			70-130	Pass	
Heptachlor epoxide	%	126			70-130	Pass	
Hexachlorobenzene	%	77			70-130	Pass	
Methoxychlor	%	110			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	90			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Ethion	%	122			70-130	Pass	
Fenitrothion	%	89			70-130	Pass	
Methyl parathion	%	89			70-130	Pass	
Mevinphos	%	88			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	135			30-130	Fail	
2.4-Dichlorophenol	%	91			30-130	Pass	
2.4.5-Trichlorophenol	%	114			30-130	Pass	
2.4.6-Trichlorophenol	%	113			30-130	Pass	
2.6-Dichlorophenol	%	97			30-130	Pass	
4-Chloro-3-methylphenol	%	89			30-130	Pass	
Pentachlorophenol	%	99			30-130	Pass	
Tetrachlorophenols - Total	%	100			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	115			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	126			30-130	Pass	
2-Methylphenol (o-Cresol)	%	138			30-130	Fail	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	%	112			30-130	Pass	
2.4-Dimethylphenol	%	77			30-130	Pass	
2.4-Dinitrophenol	%	26			30-130	Fail	
3&4-Methylphenol (m&p-Cresol)	%	139			30-130	Fail	
4-Nitrophenol	%	72			30-130	Pass	
Dinoseb	%	112			30-130	Pass	
Phenol	%	78			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	74			70-130	Pass	
1.3-Dichlorobenzene	%	84			70-130	Pass	
1.3.5-Trichlorobenzene	%	73			70-130	Pass	
1.4-Dichlorobenzene	%	78			70-130	Pass	
2.4-Dinitrotoluene	%	95			70-130	Pass	
N-Nitrosodipropylamine	%	74			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	107			80-120	Pass	
Cadmium	%	101			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	108			80-120	Pass	
Mercury	%	113			80-120	Pass	
Nickel	%	101			80-120	Pass	
Zinc	%	96			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	95			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	96			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	92			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	97			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	64			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	97			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	94			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	92			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	89			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	90			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	93			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	89			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	89			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	118			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	167			50-150	Fail	
Perfluorohexanesulfonic acid (PFHxS)	%	91			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)			%	90			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)			%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)			%	116			50-150	Pass	
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	102			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)			%	104			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)			%	83			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 C10-C14	S20-No15612	NCP	%	117			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No15612	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No28823	NCP	%	101			75-125	Pass	
Cadmium	S20-No28823	NCP	%	96			75-125	Pass	
Chromium	S20-No28823	NCP	%	97			75-125	Pass	
Copper	S20-No28823	NCP	%	97			75-125	Pass	
Lead	S20-No28823	NCP	%	103			75-125	Pass	
Mercury	S20-No28823	NCP	%	108			75-125	Pass	
Nickel	S20-No28823	NCP	%	101			75-125	Pass	
Zinc	S20-No28823	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No34454	NCP	%	96			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No34454	NCP	%	96			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No34454	NCP	%	99			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No34454	NCP	%	100			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No34454	NCP	%	99			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No34454	NCP	%	99			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No34454	NCP	%	93			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No34454	NCP	%	91			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No34454	NCP	%	95			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No34454	NCP	%	74			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No34454	NCP	%	92			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No34454	NCP	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No34454	NCP	%	82			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No34454	NCP	%	73			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No34454	NCP	%	78			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No34454	NCP	%	80			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No34454	NCP	%	84			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No34454	NCP	%	90			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No34454	NCP	%	85			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No34454	NCP	%	87			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No34454	NCP	%	93			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No34454	NCP	%	117			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No34454	NCP	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No34454	NCP	%	88			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No34454	NCP	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No34454	NCP	%	89			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No34454	NCP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No34454	NCP	%	102			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No34454	NCP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No34454	NCP	%	76			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	S20-No32905	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S20-No19324	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S20-No19324	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S20-No19324	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S20-No32905	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S20-No32905	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1.2.2-Tetrachloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Propanone (Acetone)	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chlorotoluene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Allyl chloride	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon disulfide	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroform	S20-No32905	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.2-Dichloroethene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iodomethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Styrene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vinyl chloride	S20-No32905	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S20-No32905	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass
TRH C6-C10	S20-No32905	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
TRH >C10-C16	S20-No19324	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass
TRH >C16-C34	S20-No19324	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass
TRH >C34-C40	S20-No19324	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-No27369	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-No27369	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S20-No27369	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No34453	NCP	ug/L	0.01	0.01	3.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No34453	NCP	ug/L	0.19	0.20	3.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<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)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No34453	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No34453	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	LP-TP01-0.1	Nov 11, 2020		Soil	S20-No27815	X	X		X	X	X	X	X		X	X	
2	LP-TP01-0.5	Nov 11, 2020		Soil	S20-No27816		X	X	X	X	X	X	X		X	X	
3	QC101_20201 11	Nov 11, 2020		Soil	S20-No27817		X	X	X	X	X	X	X		X	X	
4	QC301_20201 11 (TB)	Nov 11, 2020		Water	S20-No27818									X			
5	QC401_20201 11 (TS)	Nov 11, 2020		Water	S20-No27819												X
6	QC501_20201 111	Nov 11, 2020		Water	S20-No27820		X		X	X	X		X		X	X	

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Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
7	LP-TP01-1.1	Nov 11, 2020		Soil	S20-No27821		X	X	X	X	X	X	X		X	X	
8	LP-TP02-0.1	Nov 11, 2020		Soil	S20-No27822	X	X		X	X	X	X	X		X	X	
9	LP-TP02-0.4	Nov 11, 2020		Soil	S20-No27823	X	X		X	X	X	X	X		X	X	
10	LP-TP02-0.7	Nov 11, 2020		Soil	S20-No27824		X	X	X	X	X	X	X		X		
11	LP-TP02_1.0	Nov 11, 2020		Soil	S20-No27825		X	X	X	X	X	X	X		X	X	
12	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27826	X	X		X	X	X	X	X		X	X	
13	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27827	X	X		X	X	X	X	X		X	X	
14	LP-TP03_0.7	Nov 11, 2020		Soil	S20-No27828		X	X	X	X	X	X	X		X		
Test Counts						5	12	6	12	12	12	11	12	1	12	10	1

Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

ERM Sydney
Level 15, 309 Kent St
Sydney
NSW 2000

Attention:	Ian Batterley
Report	757234-AID
Project Name	KAMAY WHARF PROJECT LA PEROUSE
Project ID	0564417
Received Date	Nov 16, 2020
Date Reported	Nov 25, 2020

Methodology:

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

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name KAMAY WHARF PROJECT LA PEROUSE
Project ID 0564417
Date Sampled Nov 11, 2020
Report 757234-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
LP-TP01-0.1	20-No27815	Nov 11, 2020	Approximate Sample 684g Sample consisted of: Grey fine-grained sandy soil, rocks, sandstone and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP02-0.1	20-No27822	Nov 11, 2020	Approximate Sample 810g Sample consisted of: Grey fine-grained sandy soil, rocks, sandstone and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP02-0.4	20-No27823	Nov 11, 2020	Approximate Sample 797g Sample consisted of: Grey fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP03_0.2	20-No27826	Nov 11, 2020	Approximate Sample 723g Sample consisted of: Grey fine-grained sandy soil, rocks, sandstone and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
LP-TP03_0.2	20-No27827	Nov 11, 2020	Approximate Sample 741g Sample consisted of: Grey fine-grained sandy soil, rocks, sandstone and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 17, 2020	Indefinite

eurofins | Environment Testing

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
Sydney
NSW 2000

Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	LP-TP01-0.1	Nov 11, 2020		Soil	S20-No27815	X	X		X	X	X	X	X		X	X	
2	LP-TP01-0.5	Nov 11, 2020		Soil	S20-No27816		X	X	X	X	X	X	X		X	X	
3	QC101_20201 11	Nov 11, 2020		Soil	S20-No27817		X	X	X	X	X	X	X		X	X	
4	QC301_20201 11 (TB)	Nov 11, 2020		Water	S20-No27818									X			
5	QC401_20201 11 (TS)	Nov 11, 2020		Water	S20-No27819												X
6	QC501_20201 111	Nov 11, 2020		Water	S20-No27820		X		X	X	X		X		X	X	

eurofins | Environment Testing

ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

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Company Name: ERM Sydney
Address: Level 15, 309 Kent St
Sydney
NSW 2000

Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
7	LP-TP01-1.1	Nov 11, 2020		Soil	S20-No27821		X	X	X	X	X	X	X		X	X	
8	LP-TP02-0.1	Nov 11, 2020		Soil	S20-No27822	X	X		X	X	X	X	X		X	X	
9	LP-TP02-0.4	Nov 11, 2020		Soil	S20-No27823	X	X		X	X	X	X	X		X	X	
10	LP-TP02-0.7	Nov 11, 2020		Soil	S20-No27824		X	X	X	X	X	X	X		X		
11	LP-TP02_1.0	Nov 11, 2020		Soil	S20-No27825		X	X	X	X	X	X	X		X	X	
12	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27826	X	X		X	X	X	X	X		X	X	
13	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27827	X	X		X	X	X	X	X		X	X	
14	LP-TP03_0.7	Nov 11, 2020		Soil	S20-No27828		X	X	X	X	X	X	X		X		
Test Counts						5	12	6	12	12	12	11	12	1	12	10	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

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
N/A	Not applicable

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos (NSW)

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

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

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

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ERM Sydney
Level 15, 309 Kent St
Sydney
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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **757234-S**
Project name KAMAY WHARF PROJECT LA PEROUSE
Project ID 0564417
Received Date Nov 16, 2020

Client Sample ID			**LP-TP01-0.1**	**LP-TP01-0.5**	**QC101_2020111**	**LP-TP01-1.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S20-No27815**	**S20-No27816**	**S20-No27817**	**S20-No27821**
Date Sampled			**Nov 11, 2020**	**Nov 11, 2020**	**Nov 11, 2020**	**Nov 11, 2020**
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	< 50
TRH C29-C36	50	mg/kg	61	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	61	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	111	106	132	126
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	111	106	132	126
Toluene-d8 (surr.)	1	%	111	96	94	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	87	90	91	85
p-Terphenyl-d14 (surr.)	1	%	77	82	81	77
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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	111	99	96	85
Tetrachloro-m-xylene (surr.)	1	%	83	88	85	81

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
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
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	%	88	93	88	78
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	76	79	76	68
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	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
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	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
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	76	79	76	68
Nitrobenzene-d5 (surr.)	1	%	81	84	84	78
2-Fluorobiphenyl (surr.)	1	%	87	90	91	85
2.4.6-Tribromophenol (surr.)	1	%	87	81	92	65
Heavy Metals						
Arsenic	2	mg/kg	2.3	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	< 5
Copper	5	mg/kg	10	< 5	< 5	< 5
Lead	5	mg/kg	29	18	16	7.1
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	26	< 5	< 5	6.7
% Moisture	1	%	9.3	7.2	7.3	8.3
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	%	104	110	109	104
13C5-PFPeA (surr.)	1	%	139	141	136	145
13C5-PFHxA (surr.)	1	%	124	126	130	117

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	124	130	109	122
13C8-PFOA (surr.)	1	%	137	131	126	136
13C5-PFNA (surr.)	1	%	114	125	130	129
13C6-PFDA (surr.)	1	%	130	139	135	132
13C2-PFUnDA (surr.)	1	%	143	146	132	139
13C2-PFDoDA (surr.)	1	%	128	134	137	134
13C2-PFTeDA (surr.)	1	%	115	129	130	125
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	%	91	109	98	104
D3-N-MeFOSA (surr.)	1	%	76	79	89	88
D5-N-EtFOSA (surr.)	1	%	92	104	105	106
D7-N-MeFOSE (surr.)	1	%	93	83	74	103
D9-N-EtFOSE (surr.)	1	%	101	104	99	106
D5-N-EtFOSAA (surr.)	1	%	94	106	103	99
D3-N-MeFOSAA (surr.)	1	%	92	93	95	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	%	131	122	127	119
18O2-PFHxS (surr.)	1	%	113	119	114	101
13C8-PFOS (surr.)	1	%	123	121	111	115
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	%	137	124	89	100
13C2-6:2 FTSA (surr.)	1	%	103	123	107	125
13C2-8:2 FTSA (surr.)	1	%	120	120	123	114
13C2-10:2 FTSA (surr.)	1	%	98	99	105	97

Client Sample ID			LP-TP01-0.1	LP-TP01-0.5	QC101_2020111	LP-TP01-1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27815	S20-No27816	S20-No27817	S20-No27821
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
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
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	6.0	6.0	5.9
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	2.8	2.8	2.8
Reaction Ratings*[S05]	-	comment	-	2.0	2.0	2.0

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
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	< 50
TRH C29-C36	50	mg/kg	76	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	76	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	122	132	103
Volatile Organics						
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Volatile Organics						
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	101	122	132	103
Toluene-d8 (surr.)	1	%	97	94	98	109
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	90	88	92	91
p-Terphenyl-d14 (surr.)	1	%	101	97	102	103
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-BHC	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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	96	86	89	91
Tetrachloro-m-xylene (surr.)	1	%	82	82	85	87

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
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
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	%	96	95	97	95
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	< 1

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	65	53	77	75
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Aniline	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
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	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
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	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
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Semivolatile Organics						
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pronamide	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
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	65	53	77	75
Nitrobenzene-d5 (surr.)	1	%	83	83	85	83
2-Fluorobiphenyl (surr.)	1	%	90	88	92	91
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	INT
Heavy Metals						
Arsenic	2	mg/kg	3.2	< 2	< 2	6.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5	13
Copper	5	mg/kg	5.2	< 5	< 5	< 5
Lead	5	mg/kg	20	8.7	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	17	< 5	< 5	< 5
% Moisture	1	%	11	6.3	11	15
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	%	101	57	-	130
13C5-PFPeA (surr.)	1	%	155	67	-	170
13C5-PFHxA (surr.)	1	%	124	111	-	144

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	126	114	-	136
13C8-PFOA (surr.)	1	%	130	110	-	168
13C5-PFNA (surr.)	1	%	126	114	-	151
13C6-PFDA (surr.)	1	%	136	130	-	180
13C2-PFUnDA (surr.)	1	%	146	108	-	142
13C2-PFDoDA (surr.)	1	%	136	132	-	137
13C2-PFTeDA (surr.)	1	%	124	99	-	123
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	%	98	116	-	101
D3-N-MeFOSA (surr.)	1	%	80	70	-	90
D5-N-EtFOSA (surr.)	1	%	93	82	-	102
D7-N-MeFOSE (surr.)	1	%	87	106	-	67
D9-N-EtFOSE (surr.)	1	%	86	119	-	112
D5-N-EtFOSAA (surr.)	1	%	99	98	-	156
D3-N-MeFOSAA (surr.)	1	%	95	116	-	114
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	%	124	115	-	129
18O2-PFHxS (surr.)	1	%	108	118	-	114
13C8-PFOS (surr.)	1	%	111	124	-	120
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	%	147	109	-	117
13C2-6:2 FTSA (surr.)	1	%	126	113	-	189
13C2-8:2 FTSA (surr.)	1	%	130	142	-	184
13C2-10:2 FTSA (surr.)	1	%	105	115	-	122

Client Sample ID			LP-TP02-0.1	LP-TP02-0.4	LP-TP02-0.7	LP-TP02_1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No27822	S20-No27823	S20-No27824	S20-No27825
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit				
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
Acid Sulfate Soils Field pH Test						
pH-F (Field pH test)*	0.1	pH Units	-	-	6.8	6.5
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	-	4.1	4.3
Reaction Ratings*[S05]	-	comment	-	-	2.0	2.0

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
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	%	117	115	133
Volatile Organics					
1.1-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dibromoethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichloropropane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trimethylbenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Butanone (MEK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Propanone (Acetone)	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
4-Chlorotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Methyl-2-pentanone (MIBK)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Allyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Bromobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromoform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon disulfide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloroform	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
cis-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibromomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Iodomethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Isopropyl benzene (Cumene)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Styrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
trans-1.2-Dichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vinyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	117	115	133
Toluene-d8 (surr.)	1	%	99	106	93
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	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

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	57	84
p-Terphenyl-d14 (surr.)	1	%	91	70	94
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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	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-BHC (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	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
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	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	71	54	74
Tetrachloro-m-xylene (surr.)	1	%	78	60	81

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
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	%	78	63	80
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
Dinoseb	20	mg/kg	< 20	< 20	< 20
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20
Phenol-d6 (surr.)	1	%	53	41	64
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5
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
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
b-BHC	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
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Endrin ketone	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
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 0.5

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1
Hexachloroethane	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
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	53	41	64
Nitrobenzene-d5 (surr.)	1	%	73	49	73
2-Fluorobiphenyl (surr.)	1	%	83	57	84
2.4.6-Tribromophenol (surr.)	1	%	63	28	INT
Heavy Metals					
Arsenic	2	mg/kg	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	< 5
Copper	5	mg/kg	6.8	< 5	< 5
Lead	5	mg/kg	17	16	6.4
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5
Zinc	5	mg/kg	11	7.9	< 5
% Moisture	1	%	7.4	6.5	13
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	-
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	%	103	114	-
13C5-PFPeA (surr.)	1	%	145	142	-
13C5-PFHxA (surr.)	1	%	119	140	-

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C4-PFHpA (surr.)	1	%	117	131	-
13C8-PFOA (surr.)	1	%	133	132	-
13C5-PFNA (surr.)	1	%	129	140	-
13C6-PFDA (surr.)	1	%	135	137	-
13C2-PFUnDA (surr.)	1	%	142	148	-
13C2-PFDoDA (surr.)	1	%	131	144	-
13C2-PFTeDA (surr.)	1	%	130	117	-
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	%	98	103	-
D3-N-MeFOSA (surr.)	1	%	86	93	-
D5-N-EtFOSA (surr.)	1	%	97	100	-
D7-N-MeFOSE (surr.)	1	%	106	96	-
D9-N-EtFOSE (surr.)	1	%	98	117	-
D5-N-EtFOSAA (surr.)	1	%	115	107	-
D3-N-MeFOSAA (surr.)	1	%	98	104	-
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	%	114	132	-
18O2-PFHxS (surr.)	1	%	113	110	-
13C8-PFOS (surr.)	1	%	115	123	-
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	%	135	106	-
13C2-6:2 FTSA (surr.)	1	%	168	146	-
13C2-8:2 FTSA (surr.)	1	%	146	124	-
13C2-10:2 FTSA (surr.)	1	%	111	109	-

Client Sample ID			LP-TP03_0.2	LP-TP03_0.2	LP-TP03_0.7
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			S20-No27826	S20-No27827	S20-No27828
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
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	-
Acid Sulfate Soils Field pH Test					
pH-F (Field pH test)*	0.1	pH Units	-	-	6.0
pH-FOX (Field pH Peroxide test)*	0.1	pH Units	-	-	4.3
Reaction Ratings*[S05]	-	comment	-	-	2.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B1			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Volatile Organics	Sydney	Nov 19, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 19, 2020	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 19, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Acid Sulfate Soils Field pH Test	Sydney	Nov 19, 2020	7 Days
- Method: LTM-GEN-7060 Determination of field pH (pHF) and field pH peroxide (pHFOX) tests			
Organochlorine Pesticides	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Phenols (Halogenated)	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 19, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
% Moisture	Sydney	Nov 17, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 20, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 20, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 20, 2020	180 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	LP-TP01-0.1	Nov 11, 2020		Soil	S20-No27815	X	X		X	X	X	X	X		X	X	
2	LP-TP01-0.5	Nov 11, 2020		Soil	S20-No27816		X	X	X	X	X	X	X		X	X	
3	QC101_20201 11	Nov 11, 2020		Soil	S20-No27817		X	X	X	X	X	X	X		X	X	
4	QC301_20201 11 (TB)	Nov 11, 2020		Water	S20-No27818									X			
5	QC401_20201 11 (TS)	Nov 11, 2020		Water	S20-No27819												X
6	QC501_20201 111	Nov 11, 2020		Water	S20-No27820		X		X	X	X		X		X	X	

eurofins | Environment Testing

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Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SW: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
7	LP-TP01-1.1	Nov 11, 2020		Soil	S20-No27821		X	X	X	X	X	X	X		X	X	
8	LP-TP02-0.1	Nov 11, 2020		Soil	S20-No27822	X	X		X	X	X	X	X		X	X	
9	LP-TP02-0.4	Nov 11, 2020		Soil	S20-No27823	X	X		X	X	X	X	X		X	X	
10	LP-TP02-0.7	Nov 11, 2020		Soil	S20-No27824		X	X	X	X	X	X	X		X		
11	LP-TP02_1.0	Nov 11, 2020		Soil	S20-No27825		X	X	X	X	X	X	X		X	X	
12	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27826	X	X		X	X	X	X	X		X	X	
13	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27827	X	X		X	X	X	X	X		X	X	
14	LP-TP03_0.7	Nov 11, 2020		Soil	S20-No27828		X	X	X	X	X	X	X		X		
Test Counts						5	12	6	12	12	12	11	12	1	12	10	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (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	< 0.2			0.2	Pass	
Toxaphene	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	106			70-130	Pass	
Acenaphthylene	%	112			70-130	Pass	
Anthracene	%	110			70-130	Pass	
Benz(a)anthracene	%	92			70-130	Pass	
Benzo(a)pyrene	%	111			70-130	Pass	
Benzo(b&j)fluoranthene	%	107			70-130	Pass	
Chrysene	%	91			70-130	Pass	
Fluoranthene	%	99			70-130	Pass	
Fluorene	%	113			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	121			70-130	Pass	
Naphthalene	%	112			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	92			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	95			70-130	Pass	
4.4'-DDD	%	83			70-130	Pass	
4.4'-DDE	%	93			70-130	Pass	
Aldrin	%	87			70-130	Pass	
b-BHC	%	70			70-130	Pass	
Dieldrin	%	71			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	%	91			70-130	Pass	
Endosulfan sulphate	%	84			70-130	Pass	
Endrin	%	115			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	82			70-130	Pass	
Heptachlor	%	125			70-130	Pass	
Heptachlor epoxide	%	87			70-130	Pass	
Hexachlorobenzene	%	110			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Ethion	%	82			70-130	Pass	
Fenitrothion	%	115			70-130	Pass	
Methyl parathion	%	129			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	89			30-130	Pass	
2.4-Dichlorophenol	%	101			30-130	Pass	
2.4.5-Trichlorophenol	%	84			30-130	Pass	
2.4.6-Trichlorophenol	%	92			30-130	Pass	
2.6-Dichlorophenol	%	97			30-130	Pass	
4-Chloro-3-methylphenol	%	93			30-130	Pass	
Pentachlorophenol	%	73			30-130	Pass	
Tetrachlorophenols - Total	%	77			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Methylphenol (o-Cresol)	%	72			30-130	Pass	
2.4-Dimethylphenol	%	76			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	83			30-130	Pass	
4-Nitrophenol	%	111			30-130	Pass	
Dinoseb	%	91			30-130	Pass	
Phenol	%	81			30-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	104			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	104			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	102			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	76			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	107			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	104			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	128			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	128			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	111			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	94			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	108			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	117			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	113			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	142			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	102			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	101			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	113			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	102			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	119			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	109			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	88			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	144			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	105			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	100			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	119			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	139			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	106			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	105			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 C10-C14	S20-No27333	NCP	%	88			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S20-No27431	NCP	%	128			70-130	Pass	
Toluene	S20-No27431	NCP	%	113			70-130	Pass	
Ethylbenzene	S20-No27431	NCP	%	98			70-130	Pass	
m&p-Xylenes	S20-No27431	NCP	%	91			70-130	Pass	
o-Xylene	S20-No27431	NCP	%	104			70-130	Pass	
Xylenes - Total*	S20-No27431	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No27333	NCP	%	87			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S20-No31832	NCP	%	101			70-130	Pass	
Acenaphthylene	S20-No31832	NCP	%	109			70-130	Pass	
Anthracene	S20-No31832	NCP	%	106			70-130	Pass	
Benz(a)anthracene	S20-No31832	NCP	%	90			70-130	Pass	
Benzo(a)pyrene	S20-No31832	NCP	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	S20-No31832	NCP	%	108			70-130	Pass	
Benzo(g.h.i)perylene	S20-No31832	NCP	%	118			70-130	Pass	
Benzo(k)fluoranthene	S20-No31832	NCP	%	120			70-130	Pass	
Chrysene	S20-No31832	NCP	%	87			70-130	Pass	
Dibenz(a.h)anthracene	S20-No31832	NCP	%	110			70-130	Pass	
Fluoranthene	S20-No31832	NCP	%	95			70-130	Pass	
Fluorene	S20-No31832	NCP	%	109			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No31832	NCP	%	94			70-130	Pass	
Naphthalene	S20-No31832	NCP	%	105			70-130	Pass	
Phenanthrene	S20-No31832	NCP	%	101			70-130	Pass	
Pyrene	S20-No31832	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S20-No31474	NCP	%	91			70-130	Pass	
4.4'-DDE	S20-No31474	NCP	%	87			70-130	Pass	
4.4'-DDT	S20-No31474	NCP	%	73			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	S20-No31474	NCP	%	82			70-130	Pass	
Endosulfan I	S20-No31474	NCP	%	84			70-130	Pass	
Endrin	S20-No31474	NCP	%	71			70-130	Pass	
Endrin ketone	S20-No31474	NCP	%	88			70-130	Pass	
g-BHC (Lindane)	S20-No31474	NCP	%	74			70-130	Pass	
Heptachlor epoxide	S20-No31474	NCP	%	70			70-130	Pass	
Hexachlorobenzene	S20-No31474	NCP	%	105			70-130	Pass	
Methoxychlor	S20-No31474	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S20-No31832	NCP	%	130			70-130	Pass	
Dimethoate	S20-No31474	NCP	%	87			70-130	Pass	
Ethion	S20-No31832	NCP	%	92			70-130	Pass	
Fenitrothion	S20-No31832	NCP	%	122			70-130	Pass	
Methyl parathion	S20-No31832	NCP	%	120			70-130	Pass	
Mevinphos	S20-No31474	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S20-No31474	NCP	%	90			30-130	Pass	
2.4-Dichlorophenol	S20-No31474	NCP	%	97			30-130	Pass	
2.4.5-Trichlorophenol	S20-No31474	NCP	%	75			30-130	Pass	
2.4.6-Trichlorophenol	S20-No31474	NCP	%	83			30-130	Pass	
2.6-Dichlorophenol	S20-No31474	NCP	%	91			30-130	Pass	
4-Chloro-3-methylphenol	S20-No31474	NCP	%	100			30-130	Pass	
Pentachlorophenol	S20-No31474	NCP	%	118			30-130	Pass	
Tetrachlorophenols - Total	S20-No31474	NCP	%	91			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methylphenol (o-Cresol)	S20-No31474	NCP	%	79			30-130	Pass	
2-Nitrophenol	S20-No20023	NCP	%	130			30-130	Pass	
2.4-Dimethylphenol	S20-No31474	NCP	%	93			30-130	Pass	
2.4-Dinitrophenol	S20-No31474	NCP	%	96			70-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No31474	NCP	%	89			30-130	Pass	
Phenol	S20-No31474	NCP	%	87			30-130	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
2.3.4.6-Tetrachlorophenol	S20-No20023	NCP	%	122			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No31635	NCP	%	95			75-125	Pass	
Cadmium	S20-No31635	NCP	%	97			75-125	Pass	
Chromium	S20-No31635	NCP	%	91			75-125	Pass	
Copper	S20-No31635	NCP	%	91			75-125	Pass	
Lead	S20-No31635	NCP	%	102			75-125	Pass	
Mercury	S20-No31635	NCP	%	98			75-125	Pass	
Nickel	S20-No31635	NCP	%	91			75-125	Pass	
Zinc	S20-No31635	NCP	%	108			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No27816	CP	%	85			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No27816	CP	%	80			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No27816	CP	%	85			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No27816	CP	%	88			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No27816	CP	%	65			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorononanoic acid (PFNA)	S20-No27816	CP	%	84			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No27816	CP	%	82			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No27816	CP	%	106			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No27816	CP	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No27816	CP	%	96			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No27816	CP	%	76			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No27816	CP	%	83			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No27816	CP	%	82			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No27816	CP	%	89			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No27816	CP	%	96			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No27816	CP	%	96			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No27816	CP	%	79			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No27816	CP	%	89			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No27816	CP	%	76			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No27816	CP	%	98			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No27816	CP	%	85			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No27816	CP	%	77			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No27816	CP	%	118			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No27816	CP	%	84			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No27816	CP	%	79			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No27816	CP	%	90			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No27816	CP	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No27816	CP	%	115			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No27816	CP	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No27816	CP	%	87			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	S20-No27815	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No27815	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No27815	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No27815	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No27815	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No27815	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No27815	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S20-No27815	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No27815	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	S20-No31634	NCP	mg/kg	37	36	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No27815	CP	%	9.3	9.7	3.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No27815	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No27815	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No27815	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)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No27815	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No27815	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-No27817	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No27817	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-No27817	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-No27817	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No27817	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No27817	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S20-No27817	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
g-BHC (Lindane)	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No27817	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S20-No27817	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S20-No27817	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S20-No27817	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S20-No27817	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S20-No27817	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S20-No27817	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S20-No27817	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Nitrophenol	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S20-No27817	CP	mg/kg	< 5	< 5	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S20-No27817	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S20-No27817	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S20-No27817	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Nitroaniline	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S20-No27817	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dibenzofuran	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S20-No27817	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S20-No27817	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No27822	CP	mg/kg	3.2	3.1	6.0	30%	Pass	
Cadmium	S20-No27822	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No27822	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S20-No27822	CP	mg/kg	5.2	5.6	8.0	30%	Pass	
Mercury	S20-No27822	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No27822	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S20-No27822	CP	mg/kg	17	17	3.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S20-No27828	CP	%	13	13	2.0	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
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

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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Sydney
NSW 2000

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ian Batterley**

Report **757234-W**
Project name KAMAY WHARF PROJECT LA PEROUSE
Project ID 0564417
Received Date Nov 16, 2020

Client Sample ID			**QC301_20201111 (TB)**	**QC401_20201111 (TS)**	**QC501_20201111**
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27818**	**S20-No27819**	**S20-No27820**
Date Sampled			**Nov 11, 2020**	**Nov 11, 2020**	**Nov 11, 2020**
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02
TRH >C10-C16	0.05	mg/L	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	-	-	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02
TRH C10-C14	0.05	mg/L	-	-	< 0.05
TRH C15-C28	0.1	mg/L	-	-	< 0.1
TRH C29-C36	0.1	mg/L	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	-	-	< 0.1
BTEX					
Benzene	0.001	mg/L	< 0.001	-	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	-	< 0.003
4-Bromofluorobenzene (surr.)	1	%	122	-	81
BTEX					
Benzene	1	%	-	97	-
Ethylbenzene	1	%	-	91	-
m&p-Xylenes	1	%	-	96	-
o-Xylene	1	%	-	87	-
Toluene	1	%	-	93	-
Xylenes - Total	1	%	-	90	-
4-Bromofluorobenzene (surr.)	1	%	-	114	-

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
1.1-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.1-Dichloroethene	0.001	mg/L	-	-	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	-	-	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dibromoethane	0.001	mg/L	-	-	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.2-Dichloroethane	0.001	mg/L	-	-	< 0.001
1.2-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	-	-	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
1.3-Dichloropropane	0.001	mg/L	-	-	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	-	-	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	-	-	< 0.001
2-Butanone (MEK)	0.001	mg/L	-	-	< 0.001
2-Propanone (Acetone)	0.001	mg/L	-	-	< 0.001
4-Chlorotoluene	0.001	mg/L	-	-	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	-	-	< 0.001
Allyl chloride	0.001	mg/L	-	-	< 0.001
Benzene	0.001	mg/L	-	-	< 0.001
Bromobenzene	0.001	mg/L	-	-	< 0.001
Bromochloromethane	0.001	mg/L	-	-	< 0.001
Bromodichloromethane	0.001	mg/L	-	-	< 0.001
Bromoform	0.001	mg/L	-	-	< 0.001
Bromomethane	0.001	mg/L	-	-	< 0.001
Carbon disulfide	0.001	mg/L	-	-	< 0.001
Carbon Tetrachloride	0.001	mg/L	-	-	< 0.001
Chlorobenzene	0.001	mg/L	-	-	< 0.001
Chloroethane	0.001	mg/L	-	-	< 0.001
Chloroform	0.005	mg/L	-	-	< 0.005
Chloromethane	0.001	mg/L	-	-	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001
Dibromochloromethane	0.001	mg/L	-	-	< 0.001
Dibromomethane	0.001	mg/L	-	-	< 0.001
Dichlorodifluoromethane	0.001	mg/L	-	-	< 0.001
Ethylbenzene	0.001	mg/L	-	-	< 0.001
Iodomethane	0.001	mg/L	-	-	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	-	-	< 0.001
m&p-Xylenes	0.002	mg/L	-	-	< 0.002
Methylene Chloride	0.001	mg/L	-	-	< 0.001
o-Xylene	0.001	mg/L	-	-	< 0.001
Styrene	0.001	mg/L	-	-	< 0.001
Tetrachloroethene	0.001	mg/L	-	-	< 0.001
Toluene	0.001	mg/L	-	-	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	-	-	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Volatile Organics					
Trichloroethene	0.001	mg/L	-	-	< 0.001
Trichlorofluoromethane	0.001	mg/L	-	-	< 0.001
Vinyl chloride	0.001	mg/L	-	-	< 0.001
Xylenes - Total*	0.003	mg/L	-	-	< 0.003
Total MAH*	0.003	mg/L	-	-	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	-	-	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	-	-	< 0.005
4-Bromofluorobenzene (surr.)	1	%	-	-	81
Toluene-d8 (surr.)	1	%	-	-	97
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Anthracene	0.001	mg/L	-	-	< 0.001
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Chrysene	0.001	mg/L	-	-	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Naphthalene	0.001	mg/L	-	-	< 0.001
Phenanthrene	0.001	mg/L	-	-	< 0.001
Pyrene	0.001	mg/L	-	-	< 0.001
Total PAH*	0.001	mg/L	-	-	< 0.001
2-Fluorobiphenyl (surr.)	1	%	-	-	52
p-Terphenyl-d14 (surr.)	1	%	-	-	114
Organochlorine Pesticides					
Chlordanes - Total	0.002	mg/L	-	-	< 0.002
4.4'-DDD	0.0001	mg/L	-	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	-	< 0.0001
a-BHC	0.0001	mg/L	-	-	< 0.0001
Aldrin	0.0001	mg/L	-	-	< 0.0001
b-BHC	0.0001	mg/L	-	-	< 0.0001
d-BHC	0.0001	mg/L	-	-	< 0.0001
Dieldrin	0.0001	mg/L	-	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	-	< 0.0001
Endrin	0.0001	mg/L	-	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	-	< 0.0001
Heptachlor	0.0001	mg/L	-	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	-	< 0.0001

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Methoxychlor	0.0002	mg/L	-	-	< 0.0002
Toxaphene	0.001	mg/L	-	-	< 0.001
Aldrin and Dieldrin (Total)*	0.0002	mg/L	-	-	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	-	-	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	-	-	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	-	-	< 0.002
Dibutylchlorendate (surr.)	1	%	-	-	67
Tetrachloro-m-xylene (surr.)	1	%	-	-	60
Organophosphorus Pesticides					
Azinphos-methyl	0.002	mg/L	-	-	< 0.002
Bolstar	0.002	mg/L	-	-	< 0.002
Chlorfenvinphos	0.002	mg/L	-	-	< 0.002
Chlorpyrifos	0.02	mg/L	-	-	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	-	-	< 0.002
Coumaphos	0.02	mg/L	-	-	< 0.02
Demeton-S	0.02	mg/L	-	-	< 0.02
Demeton-O	0.002	mg/L	-	-	< 0.002
Diazinon	0.002	mg/L	-	-	< 0.002
Dichlorvos	0.002	mg/L	-	-	< 0.002
Dimethoate	0.002	mg/L	-	-	< 0.002
Disulfoton	0.002	mg/L	-	-	< 0.002
EPN	0.002	mg/L	-	-	< 0.002
Ethion	0.002	mg/L	-	-	< 0.002
Ethoprop	0.002	mg/L	-	-	< 0.002
Ethyl parathion	0.002	mg/L	-	-	< 0.002
Fenitrothion	0.002	mg/L	-	-	< 0.002
Fensulfothion	0.002	mg/L	-	-	< 0.002
Fenthion	0.002	mg/L	-	-	< 0.002
Malathion	0.002	mg/L	-	-	< 0.002
Merphos	0.002	mg/L	-	-	< 0.002
Methyl parathion	0.002	mg/L	-	-	< 0.002
Mevinphos	0.002	mg/L	-	-	< 0.002
Monocrotophos	0.002	mg/L	-	-	< 0.002
Naled	0.002	mg/L	-	-	< 0.002
Omethoate	0.002	mg/L	-	-	< 0.002
Phorate	0.002	mg/L	-	-	< 0.002
Pirimiphos-methyl	0.02	mg/L	-	-	< 0.02
Pyrazophos	0.002	mg/L	-	-	< 0.002
Ronnel	0.002	mg/L	-	-	< 0.002
Terbufos	0.002	mg/L	-	-	< 0.002
Tetrachlorvinphos	0.002	mg/L	-	-	< 0.002
Tokuthion	0.002	mg/L	-	-	< 0.002
Trichloronate	0.002	mg/L	-	-	< 0.002
Triphenylphosphate (surr.)	1	%	-	-	73
Phenols (Halogenated)					
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Phenols (Halogenated)					
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	-	-	< 0.03
Total Halogenated Phenol*	0.01	mg/L	-	-	< 0.01
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	-	-	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
Dinoseb	0.1	mg/L	-	-	< 0.1
Phenol	0.003	mg/L	-	-	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	-	-	< 0.1
Phenol-d6 (surr.)	1	%	-	-	45
Semivolatile Organics					
2-Methyl-4.6-dinitrophenol	0.03	mg/L	-	-	< 0.03
1-Chloronaphthalene	0.005	mg/L	-	-	< 0.005
1-Naphthylamine	0.002	mg/L	-	-	< 0.002
1.2-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.3-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	-	-	< 0.005
1.2.4-Trichlorobenzene	0.002	mg/L	-	-	< 0.002
1.2.4.5-Tetrachlorobenzene	0.002	mg/L	-	-	< 0.002
1.3-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
1.3.5-Trichlorobenzene	0.005	mg/L	-	-	< 0.005
1.4-Dichlorobenzene	0.002	mg/L	-	-	< 0.002
2-Chloronaphthalene	0.002	mg/L	-	-	< 0.002
2-Chlorophenol	0.003	mg/L	-	-	< 0.003
2-Methylnaphthalene	0.002	mg/L	-	-	< 0.002
2-Methylphenol (o-Cresol)	0.003	mg/L	-	-	< 0.003
2-Naphthylamine	0.002	mg/L	-	-	< 0.002
2-Nitroaniline	0.004	mg/L	-	-	< 0.004
2-Nitrophenol	0.01	mg/L	-	-	< 0.01
2-Picoline	0.005	mg/L	-	-	< 0.005
2.3.4.6-Tetrachlorophenol	0.002	mg/L	-	-	< 0.002
2.4-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.4-Dimethylphenol	0.003	mg/L	-	-	< 0.003
2.4-Dinitrophenol	0.03	mg/L	-	-	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	-	-	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	-	-	< 0.01
2.6-Dichlorophenol	0.003	mg/L	-	-	< 0.003
2.6-Dinitrotoluene	0.004	mg/L	-	-	< 0.004
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	-	-	< 0.006

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
3-Methylcholanthrene	0.002	mg/L	-	-	< 0.002
3.3'-Dichlorobenzidine	0.005	mg/L	-	-	< 0.005
4-Aminobiphenyl	0.002	mg/L	-	-	< 0.002
4-Bromophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Chloro-3-methylphenol	0.01	mg/L	-	-	< 0.01
4-Chlorophenyl phenyl ether	0.002	mg/L	-	-	< 0.002
4-Nitrophenol	0.03	mg/L	-	-	< 0.03
4.4'-DDD	0.002	mg/L	-	-	< 0.002
4.4'-DDE	0.002	mg/L	-	-	< 0.002
4.4'-DDT	0.004	mg/L	-	-	< 0.004
7.12-Dimethylbenz(a)anthracene	0.002	mg/L	-	-	< 0.002
a-BHC	0.002	mg/L	-	-	< 0.002
Acenaphthene	0.001	mg/L	-	-	< 0.001
Acenaphthylene	0.001	mg/L	-	-	< 0.001
Acetophenone	0.002	mg/L	-	-	< 0.002
Aldrin	0.002	mg/L	-	-	< 0.002
Aniline	0.002	mg/L	-	-	< 0.002
Anthracene	0.001	mg/L	-	-	< 0.001
b-BHC	0.002	mg/L	-	-	< 0.002
Benz(a)anthracene	0.001	mg/L	-	-	< 0.001
Benzo(a)pyrene	0.001	mg/L	-	-	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	-	-	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	-	-	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	-	-	< 0.001
Benzyl chloride	0.005	mg/L	-	-	< 0.005
Bis(2-chloroethoxy)methane	0.002	mg/L	-	-	< 0.002
Bis(2-chloroisopropyl)ether	0.002	mg/L	-	-	< 0.002
Bis(2-ethylhexyl)phthalate	0.02	mg/L	-	-	< 0.02
Butyl benzyl phthalate	0.002	mg/L	-	-	< 0.002
Chrysene	0.001	mg/L	-	-	< 0.001
d-BHC	0.002	mg/L	-	-	< 0.002
Di-n-butyl phthalate	0.002	mg/L	-	-	< 0.002
Di-n-octyl phthalate	0.002	mg/L	-	-	< 0.002
Dibenz(a.h)anthracene	0.001	mg/L	-	-	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	-	-	< 0.005
Dibenzofuran	0.002	mg/L	-	-	< 0.002
Dieldrin	0.002	mg/L	-	-	< 0.002
Diethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethyl phthalate	0.002	mg/L	-	-	< 0.002
Dimethylaminoazobenzene	0.002	mg/L	-	-	< 0.002
Diphenylamine	0.002	mg/L	-	-	< 0.002
Endosulfan I	0.002	mg/L	-	-	< 0.002
Endosulfan II	0.002	mg/L	-	-	< 0.002
Endosulfan sulphate	0.002	mg/L	-	-	< 0.002
Endrin	0.002	mg/L	-	-	< 0.002
Endrin aldehyde	0.002	mg/L	-	-	< 0.002
Endrin ketone	0.002	mg/L	-	-	< 0.002
Fluoranthene	0.001	mg/L	-	-	< 0.001
Fluorene	0.001	mg/L	-	-	< 0.001

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Semivolatile Organics					
g-BHC (Lindane)	0.002	mg/L	-	-	< 0.002
Heptachlor	0.002	mg/L	-	-	< 0.002
Heptachlor epoxide	0.002	mg/L	-	-	< 0.002
Hexachlorobenzene	0.002	mg/L	-	-	< 0.002
Hexachlorobutadiene	0.002	mg/L	-	-	< 0.002
Hexachlorocyclopentadiene	0.004	mg/L	-	-	< 0.004
Hexachloroethane	0.002	mg/L	-	-	< 0.002
Indeno(1.2.3-cd)pyrene	0.001	mg/L	-	-	< 0.001
Methoxychlor	0.005	mg/L	-	-	< 0.005
N-Nitrosodibutylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosodipropylamine	0.002	mg/L	-	-	< 0.002
N-Nitrosopiperidine	0.002	mg/L	-	-	< 0.002
Naphthalene	0.001	mg/L	-	-	< 0.001
Nitrobenzene	0.005	mg/L	-	-	< 0.005
Pentachlorobenzene	0.002	mg/L	-	-	< 0.002
Pentachloronitrobenzene	0.002	mg/L	-	-	< 0.002
Pentachlorophenol	0.01	mg/L	-	-	< 0.01
Phenanthrene	0.001	mg/L	-	-	< 0.001
Phenol	0.003	mg/L	-	-	< 0.003
Pronamide	0.005	mg/L	-	-	< 0.005
Pyrene	0.001	mg/L	-	-	< 0.001
Trifluralin	0.005	mg/L	-	-	< 0.005
Phenol-d6 (surr.)	1	%	-	-	45
Nitrobenzene-d5 (surr.)	1	%	-	-	99
2-Fluorobiphenyl (surr.)	1	%	-	-	52
2.4.6-Tribromophenol (surr.)	1	%	-	-	INT
Heavy Metals					
Arsenic	0.001	mg/L	-	-	< 0.001
Cadmium	0.0002	mg/L	-	-	< 0.0002
Chromium	0.001	mg/L	-	-	< 0.001
Copper	0.001	mg/L	-	-	< 0.001
Lead	0.001	mg/L	-	-	< 0.001
Mercury	0.0001	mg/L	-	-	< 0.0001
Nickel	0.001	mg/L	-	-	< 0.001
Zinc	0.005	mg/L	-	-	< 0.005
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	-	-	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	-	-	< 0.01
13C4-PFBA (surr.)	1	%	-	-	117
13C5-PFPeA (surr.)	1	%	-	-	111

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S20-No27818	S20-No27819	S20-No27820
Date Sampled			Nov 11, 2020	Nov 11, 2020	Nov 11, 2020
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
13C5-PFHxA (surr.)	1	%	-	-	125
13C4-PFHpA (surr.)	1	%	-	-	129
13C8-PFOA (surr.)	1	%	-	-	115
13C5-PFNA (surr.)	1	%	-	-	145
13C6-PFDA (surr.)	1	%	-	-	127
13C2-PFUnDA (surr.)	1	%	-	-	121
13C2-PFDoDA (surr.)	1	%	-	-	126
13C2-PFTeDA (surr.)	1	%	-	-	100
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	-	-	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	-	-	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	-	-	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	-	-	< 0.05
13C8-FOSA (surr.)	1	%	-	-	105
D3-N-MeFOSA (surr.)	1	%	-	-	106
D5-N-EtFOSA (surr.)	1	%	-	-	114
D7-N-MeFOSE (surr.)	1	%	-	-	117
D9-N-EtFOSE (surr.)	1	%	-	-	131
D5-N-EtFOSAA (surr.)	1	%	-	-	137
D3-N-MeFOSAA (surr.)	1	%	-	-	139
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	-	-	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	-	-	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	-	-	< 0.01
13C3-PFBS (surr.)	1	%	-	-	128
18O2-PFHxS (surr.)	1	%	-	-	130
13C8-PFOS (surr.)	1	%	-	-	122
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	-	-	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	-	-	< 0.01
13C2-4:2 FTSA (surr.)	1	%	-	-	32
13C2-6:2 FTSA (surr.)	1	%	-	-	67
13C2-8:2 FTSA (surr.)	1	%	-	-	164
13C2-10:2 FTSA (surr.)	1	%	-	-	127

Client Sample ID			QC301_20201111 (TB)	QC401_20201111 (TS)	QC501_20201111
Sample Matrix			**Water**	**Water**	**Water**
Eurofins Sample No.			**S20-No27818**	**S20-No27819**	**S20-No27820**
Date Sampled			**Nov 11, 2020**	**Nov 11, 2020**	**Nov 11, 2020**
Test/Reference	LOR	Unit			
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	-	-	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	-	-	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	-	-	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	-	-	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

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	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 17, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B1			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Nov 17, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Nov 17, 2020	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Organochlorine Pesticides	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Phenols (Halogenated)	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Nov 17, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Nov 20, 2020	14 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Sydney
NSW 2000

Project Name: KAMAY WHARF PROJECT LA PEROUSE
Project ID: 0564417

Order No.:
Report #: 757234
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Nov 16, 2020 2:47 PM
Due: Nov 23, 2020
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Alena Bounkeua

Sample Detail						Asbestos - AS4964	Polycyclic Aromatic Hydrocarbons	Acid Sulfate Soils Field pH Test	Metals M8	Phenols (IWRG 621)	Suite B14: OCP/OPP	Moisture Set	Eurofins Suite B1	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	LP-TP01-0.1	Nov 11, 2020		Soil	S20-No27815	X	X		X	X	X	X	X		X	X	
2	LP-TP01-0.5	Nov 11, 2020		Soil	S20-No27816		X	X	X	X	X	X	X		X	X	
3	QC101_20201 11	Nov 11, 2020		Soil	S20-No27817		X	X	X	X	X	X	X		X	X	
4	QC301_20201 11 (TB)	Nov 11, 2020		Water	S20-No27818									X			
5	QC401_20201 11 (TS)	Nov 11, 2020		Water	S20-No27819												X
6	QC501_20201 111	Nov 11, 2020		Water	S20-No27820		X		X	X	X		X		X	X	

eurofins | Environment Testing

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Melbourne Laboratory - NATA Site # 1254 & 14271																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794																X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory																	
External Laboratory																	
7	LP-TP01-1.1	Nov 11, 2020		Soil	S20-No27821		X	X	X	X	X	X	X		X	X	
8	LP-TP02-0.1	Nov 11, 2020		Soil	S20-No27822	X	X		X	X	X	X	X		X	X	
9	LP-TP02-0.4	Nov 11, 2020		Soil	S20-No27823	X	X		X	X	X	X	X		X	X	
10	LP-TP02-0.7	Nov 11, 2020		Soil	S20-No27824		X	X	X	X	X	X	X		X		
11	LP-TP02_1.0	Nov 11, 2020		Soil	S20-No27825		X	X	X	X	X	X	X		X	X	
12	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27826	X	X		X	X	X	X	X		X	X	
13	LP-TP03_0.2	Nov 11, 2020		Soil	S20-No27827	X	X		X	X	X	X	X		X	X	
14	LP-TP03_0.7	Nov 11, 2020		Soil	S20-No27828		X	X	X	X	X	X	X		X		
Test Counts						5	12	6	12	12	12	11	12	1	12	10	1

Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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 - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.4-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.3.5-Trimethylbenzene	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
2-Butanone (MEK)	mg/L	< 0.001			0.001	Pass	
2-Propanone (Acetone)	mg/L	< 0.001			0.001	Pass	
4-Chlorotoluene	mg/L	< 0.001			0.001	Pass	
4-Methyl-2-pentanone (MIBK)	mg/L	< 0.001			0.001	Pass	
Allyl chloride	mg/L	< 0.001			0.001	Pass	
Bromobenzene	mg/L	< 0.001			0.001	Pass	
Bromochloromethane	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon disulfide	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chloroethane	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Dichlorodifluoromethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Isopropyl benzene (Cumene)	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Styrene	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Semivolatile Organics							
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.002			0.002	Pass	
1.2-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.3-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.4-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.3.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.2.4-Trichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.002			0.002	Pass	
2-Chloronaphthalene	mg/L	< 0.002			0.002	Pass	
2-Methylnaphthalene	mg/L	< 0.002			0.002	Pass	
2-Naphthylamine	mg/L	< 0.002			0.002	Pass	
2-Nitroaniline	mg/L	< 0.004			0.004	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.002			0.002	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
2.6-Dinitrotoluene	mg/L	< 0.004			0.004	Pass	
3-Methylcholanthrene	mg/L	< 0.002			0.002	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.002			0.002	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.002			0.002	Pass	
4.4'-DDE	mg/L	< 0.002			0.002	Pass	
4.4'-DDT	mg/L	< 0.004			0.004	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.002			0.002	Pass	
a-BHC	mg/L	< 0.002			0.002	Pass	
Acetophenone	mg/L	< 0.002			0.002	Pass	
Aldrin	mg/L	< 0.002			0.002	Pass	
Aniline	mg/L	< 0.002			0.002	Pass	
b-BHC	mg/L	< 0.002			0.002	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Bis(2-chloroethoxy)methane	mg/L	< 0.002			0.002	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.002			0.002	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.02			0.02	Pass	
Butyl benzyl phthalate	mg/L	< 0.002			0.002	Pass	
d-BHC	mg/L	< 0.002			0.002	Pass	
Di-n-butyl phthalate	mg/L	< 0.002			0.002	Pass	
Di-n-octyl phthalate	mg/L	< 0.002			0.002	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.002			0.002	Pass	
Dieldrin	mg/L	< 0.002			0.002	Pass	
Diethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethyl phthalate	mg/L	< 0.002			0.002	Pass	
Dimethylaminoazobenzene	mg/L	< 0.002			0.002	Pass	
Diphenylamine	mg/L	< 0.002			0.002	Pass	
Endosulfan I	mg/L	< 0.002			0.002	Pass	
Endosulfan II	mg/L	< 0.002			0.002	Pass	
Endosulfan sulphate	mg/L	< 0.002			0.002	Pass	
Endrin	mg/L	< 0.002			0.002	Pass	
Endrin aldehyde	mg/L	< 0.002			0.002	Pass	
Endrin ketone	mg/L	< 0.002			0.002	Pass	
g-BHC (Lindane)	mg/L	< 0.002			0.002	Pass	
Heptachlor	mg/L	< 0.002			0.002	Pass	
Heptachlor epoxide	mg/L	< 0.002			0.002	Pass	
Hexachlorobenzene	mg/L	< 0.002			0.002	Pass	
Hexachlorobutadiene	mg/L	< 0.002			0.002	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.004			0.004	Pass	
Hexachloroethane	mg/L	< 0.002			0.002	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosodipropylamine	mg/L	< 0.002			0.002	Pass	
N-Nitrosopiperidine	mg/L	< 0.002			0.002	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.002			0.002	Pass	
Pentachloronitrobenzene	mg/L	< 0.002			0.002	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/L	< 0.05			0.05	Pass	
Perfluoropentanoic acid (PFPeA)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanoic acid (PFHxA)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanoic acid (PFOA)	ug/L	< 0.01			0.01	Pass	
Perfluorononanoic acid (PFNA)	ug/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorodecanoic acid (PFDA)	ug/L	< 0.01			0.01	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/L	< 0.01			0.01	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/L	< 0.01			0.01	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/L	< 0.01			0.01	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/L	< 0.05			0.05	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/L	< 0.05			0.05	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/L	< 0.05			0.05	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/L	< 0.05			0.05	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/L	< 0.05			0.05	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/L	< 0.05			0.05	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/L	< 0.05			0.05	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/L	< 0.01			0.01	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/L	< 0.01			0.01	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/L	< 0.01			0.01	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/L	< 0.01			0.01	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/L	< 0.01			0.01	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/L	< 0.01			0.01	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/L	< 0.01			0.01	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/L	< 0.01			0.01	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/L	< 0.05			0.05	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/L	< 0.01			0.01	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/L	< 0.01			0.01	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	97			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
TRH >C10-C16	%	85			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	78			70-130	Pass	
TRH C10-C14	%	90			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	96			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	101			70-130	Pass	
Xylenes - Total*	%	100			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	87			70-130	Pass	
1.2-Dichlorobenzene	%	103			70-130	Pass	
Trichloroethene	%	83			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.2.4-Trichlorobenzene	%	100			70-130	Pass	
1.3-Dichlorobenzene	%	109			70-130	Pass	
1.3.5-Trichlorobenzene	%	100			70-130	Pass	
1.4-Dichlorobenzene	%	102			70-130	Pass	
N-Nitrosodipropylamine	%	114			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	107			80-120	Pass	
Cadmium	%	101			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	108			80-120	Pass	
Mercury	%	113			80-120	Pass	
Nickel	%	101			80-120	Pass	
Zinc	%	96			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	108			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	107			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	106			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	97			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	91			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	100			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	107			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	103			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	113			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	99			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	105			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	113			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	119			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	118			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	93			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	116			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	117			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	125			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	82			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	96			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	124			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	120			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	103			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	113			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	71			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	119			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	131			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	126			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	94			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S20-No15612	NCP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S20-No15612	NCP	%	117			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No28823	NCP	%	101			75-125	Pass	
Cadmium	S20-No28823	NCP	%	96			75-125	Pass	
Chromium	S20-No28823	NCP	%	97			75-125	Pass	
Copper	S20-No28823	NCP	%	97			75-125	Pass	
Lead	S20-No28823	NCP	%	103			75-125	Pass	
Mercury	S20-No28823	NCP	%	108			75-125	Pass	
Nickel	S20-No28823	NCP	%	101			75-125	Pass	
Zinc	S20-No28823	NCP	%	95			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S20-No28823	NCP	%	111			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No28823	NCP	%	97			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No28823	NCP	%	105			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No28823	NCP	%	99			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S20-No28823	NCP	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	S20-No28823	NCP	%	101			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S20-No28823	NCP	%	104			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No28823	NCP	%	96			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No28823	NCP	%	111			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S20-No28823	NCP	%	84			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No28823	NCP	%	90			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S20-No28823	NCP	%	99			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No28823	NCP	%	108			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No28823	NCP	%	102			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No28823	NCP	%	91			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No28823	NCP	%	90			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No28823	NCP	%	98			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No28823	NCP	%	100			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S20-No28823	NCP	%	84			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No28823	NCP	%	100			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No28823	NCP	%	105			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoropentanesulfonic acid (PFPeS)	S20-No28823	NCP	%	99			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No28823	NCP	%	102			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No28823	NCP	%	100			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No28823	NCP	%	111			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No28823	NCP	%	77			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S20-No28823	NCP	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No28823	NCP	%	113			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No28823	NCP	%	107			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No28823	NCP	%	101			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	S20-No22395	NCP	mg/L	1.4	1.5	5.0	30%	Pass	
TRH >C16-C34	S20-No22395	NCP	mg/L	< 0.1	0.1	47	30%	Fail	Q15
TRH >C34-C40	S20-No22395	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S20-No22395	NCP	mg/L	1.6	1.6	4.0	30%	Pass	
TRH C15-C28	S20-No22395	NCP	mg/L	0.1	0.2	22	30%	Pass	
TRH C29-C36	S20-No22395	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S20-No27369	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S20-No27369	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S20-No27369	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S20-No27369	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorotridecanoic acid (PFTrDA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<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)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S20-No27820	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S20-No27820	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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).
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Alena Bounkeua	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)
Sarah McCallion	Senior Analyst-PFAS (QLD)

Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

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

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

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ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2039275**	Page	: 1 of 16
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 06-Nov-2020 12:45
Order number	: ----	Date Analysis Commenced	: 09-Nov-2020
C-O-C number	: ----	Issue Date	: 16-Nov-2020 15:25
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2

- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC201_20201102	----	----	----	----
			Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2039275-001	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**7.6**	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	----	----	----	----
Asbestos (Trace)	1332-21-4	5	Fibres	**No**	----	----	----	----
Asbestos Type	1332-21-4	-	--	**-**	----	----	----	----
Synthetic Mineral Fibre	----	0.1	g/kg	**No**	----	----	----	----
Organic Fibre	----	0.1	g/kg	**No**	----	----	----	----
Sample weight (dry)	----	0.01	g	**729**	----	----	----	----
APPROVED IDENTIFIER:	----	-	--	**A. SMYLIE**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	**3**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**8**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**18**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**31**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	----	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		<0.5	----	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		<5	----	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		<0.5	----	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg		<5	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg		<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg		<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		<5	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<0.5	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg		<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)A: Phenolic Compounds - Continued									
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		<0.5	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075A: Phenolic Compounds - Continued									
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg		<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg		<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		<1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of PAHs	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg		<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		<0.5	----	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075C: Phthalate Esters - Continued									
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg		<0.5	----	----	----	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg		<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg		<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg		<1.0	----	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg		<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg		<1	----	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg		<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg		<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		<0.5	----	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	----	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075F: Haloethers - Continued									
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg		<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg		<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons									
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg		<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg		<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg		<1.0	----	----	----	----
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5	mg/kg		<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg		<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg		<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg		<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg		<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg		<0.5	----	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg		<0.5	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5	mg/kg		<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	mg/kg		<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg		<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	mg/kg		<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg		<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg		<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg		<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg		<0.5	----	----	----	----
Endrin	72-20-8	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075I: Organochlorine Pesticides - Continued									
beta-Endosulfan	33213-65-9	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg		<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg		<0.5	----	----	----	----
Fenthion	55-38-9	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0005**	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0005**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0005**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**80.5**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201102	----	----	----	----
				Client sampling date / time	02-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039275-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		90.8	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		108	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		106	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		112	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		82.9	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		92.0	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		77.7	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		83.4	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		94.9	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		86.1	----	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		117	----	----	----	----
Phenol-d6	13127-88-3	0.5	%		123	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		111	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		67.8	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		114	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		101	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		106	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		122	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		102	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		106	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		99.5	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		105	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		116	----	----	----	----
13C8-PFOA	----	0.0002	%		112	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Client sample ID - Client sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	QC201_20201102 - 02-Nov-2020 00:00	Mid brown soil.

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	29	149
Phenol-d6	13127-88-3	32	128
2-Chlorophenol-D4	93951-73-6	32	128
2.4.6-Tribromophenol	118-79-6	13	121
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	33	125
1.2-Dichlorobenzene-D4	2199-69-1	34	108
2-Fluorobiphenyl	321-60-8	35	121
Anthracene-d10	1719-06-8	35	123
4-Terphenyl-d14	1718-51-0	33	125
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2039275**	Page	: 1 of 21
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 06-Nov-2020
Order number	: ----	Date Analysis Commenced	: 09-Nov-2020
C-O-C number	: ----	Issue Date	: 16-Nov-2020
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. 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*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3358226)									
ES2039222-009	Anonymous	EG005T: Arsenic	7440-38-2	5	mg/kg	51	52	0.00	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	1140	1160	1.88	0% - 20%
ES2038954-022	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	6	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	62	57	6.96	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	67	61	10.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	35	32	10.7	No Limit
ES2039222-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	23	18	24.9	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	8	11	39.9	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	47	55	16.8	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	677	674	0.492	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3358234)									
ES2039222-002	Anonymous	EA055: Moisture Content	----	0.1	%	21.9	23.0	4.83	0% - 20%
ES2039325-005	Anonymous	EA055: Moisture Content	----	0.1	%	10.5	10.7	1.46	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3358228)									
ES2038954-022	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2039222-009	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.5	0.3	57.3	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3355619)									
ES2039275-001	QC201_20201102	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3355619) - continued									
ES2039275-001	QC201_20201102	EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3355619)									
ES2039275-001	QC201_20201102	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3352854) - continued									
ES2039243-031	Anonymous	EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3352854) - continued									
ES2039243-031	Anonymous	EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3352854)									
ES2039243-031	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3355621)									
ES2039275-001	QC201_20201102	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355621)									
ES2039275-001	QC201_20201102	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355621) - continued									
ES2039275-001	QC201_20201102	EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075A: Phenolic Compounds (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.00	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355618) - continued									
ES2039275-001	QC201_20201102	EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.00	No Limit
EP075C: Phthalate Esters (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075D: Nitrosamines (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075E: Nitroaromatics and Ketones (QC Lot: 3355618) - continued									
ES2039275-001	QC201_20201102	EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.00	No Limit
EP075F: Haloethers (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.00	No Limit
EP075H: Anilines and Benzidines (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075I: Organochlorine Pesticides (QC Lot: 3355618) - continued									
ES2039275-001	QC201_20201102	EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 3355618)									
ES2039275-001	QC201_20201102	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3352853)									
ES2039243-031	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3355620)									
ES2039275-001	QC201_20201102	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3352853)									
ES2039243-031	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3355620)									
ES2039275-001	QC201_20201102	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080: BTEXN (QC Lot: 3352853)									
ES2039243-031	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 3352853) - continued									
ES2039243-031	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3353155)									
ES2039275-001	QC201_20201102	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0005	0.0005	0.00	No Limit
EP2011987-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3353155)									
ES2039275-001	QC201_20201102	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP2011987-004	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3353155)									
ES2039275-001	QC201_20201102	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP2011987-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit

Method Blank (MB) and Laboratory Control Spike (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 Spike (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 (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3358226)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	89.9	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	101	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	87.0	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.0	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.1 mg/kg	89.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	88.8	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	74.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3358228)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.073 mg/kg	86.7	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3355619)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	101	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	100.0	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	103	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	98.2	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	62.0	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619) - continued								
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	77.3	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.9	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	87.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	86.6	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	103	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	105	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	68.4	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3352854)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	82.1	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	90.7	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	97.4	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	96.4	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	97.3	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	95.0	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	94.1	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	96.5	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	100	59.0	125
EP074B: Oxygenated Compounds (QCLot: 3352854)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	92.6	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	95.4	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	91.8	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	93.5	54.0	136
EP074C: Sulfonated Compounds (QCLot: 3352854)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	101	54.0	126
EP074D: Fumigants (QCLot: 3352854)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	102	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	101	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	97.3	51.0	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074D: Fumigants (QCLot: 3352854) - continued								
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	95.3	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	88.5	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3352854)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	94.6	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	124	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	115	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	102	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	109	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	105	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	99.5	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	64.2	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	95.7	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	106	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	97.8	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	101	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	99.4	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	106	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	100	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	98.5	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	95.3	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	98.1	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	86.4	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	90.5	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	90.2	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	92.2	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	92.0	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	80.2	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	91.4	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	92.8	53.0	129
EP074F: Halogenated Aromatic Compounds (QCLot: 3352854)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	93.4	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	93.7	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	97.1	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	99.5	67.0	123
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	96.2	52.0	122
EP074G: Trihalomethanes (QCLot: 3352854)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	96.0	66.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074G: Trihalomethanes (QCLot: 3352854) - continued								
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	101	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	89.8	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	89.0	60.0	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3355621)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	97.0	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	98.6	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	94.5	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	94.7	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	79.7	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	92.7	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	90.1	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	98.5	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.1	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.5	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	86.0	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	26.4	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355621)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	91.2	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	105	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	99.4	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	97.1	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	97.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	89.6	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.5	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.7	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	86.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	88.6	63.0	121
EP075A: Phenolic Compounds (QCLot: 3355618)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.2	64.0	114
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	57.0	115
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	107	55.0	117

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075A: Phenolic Compounds (QCLot: 3355618) - continued								
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	1.5 mg/kg	99.1	46.0	122
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	90.1	47.0	117
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	101	13.7	108
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	89.8	47.0	105
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	92.7	48.0	110
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	97.9	57.0	113
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	83.8	49.0	109
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	81.8	49.0	107
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	3 mg/kg	29.7	12.0	76.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355618)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	94.1	62.0	118
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	108	58.0	116
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	103	54.0	112
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.7	56.0	114
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	89.0	62.0	112
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	101	59.0	115
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	99.9	63.0	113
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	96.1	57.0	111
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	104	58.0	114
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	111	57.0	117
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 118	58.0	114
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 120	59.0	115
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	# 121	61.0	117
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	3 mg/kg	92.0	57.0	119
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	83.7	48.1	106
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	95.3	56.0	116
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	86.0	50.0	116
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	93.2	55.0	117
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	53.0	119
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	88.6	56.0	120
EP075C: Phthalate Esters (QCLot: 3355618)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	102	60.0	118
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	# 121	65.0	115
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	104	65.0	121
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	108	62.0	116
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	mg/kg	----	1.5 mg/kg	104	69.0	133
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	91.9	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075D: Nitrosamines (QCLot: 3355618)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	70.8	39.4	124
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	98.5	59.0	117
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	103	53.0	125
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	105	65.0	121
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.8	59.0	123
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	109	57.0	115
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	100	57.0	119
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.6	3 mg/kg	95.9	42.0	112
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	34.2	16.3	123
EP075E: Nitroaromatics and Ketones (QCLot: 3355618)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	75.0	27.3	129
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	60.0	116
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	109	65.0	119
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	108	62.0	116
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	98.6	58.0	118
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	100	59.0	115
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	47.2	18.0	112
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	79.8	10.0	87.0
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.6	48.3	98.5
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	104	62.0	118
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	109	36.0	114
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	# 125	62.0	114
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	78.2	36.1	102
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.3	56.0	110
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	105	54.0	110
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	99.1	48.0	108
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	57.4	112
EP075F: Haloethers (QCLot: 3355618)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	105	63.0	121
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	98.3	59.0	115
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	96.5	58.0	112
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	86.0	58.0	110
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	82.0	58.0	112
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.6	58.0	116
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	57.0	115
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	79.6	54.0	116

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618) - continued								
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	62.9	108
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	39.1	110
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	59.0	117
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	60.6	24.3	108
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	80.5	57.0	109
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	81.7	59.0	111
EP075H: Anilines and Benzidines (QCLot: 3355618)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	72.2	13.2	108
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	23.4	20.5	99.0
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	# 114	52.0	112
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	83.4	31.5	93.7
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	95.0	60.0	110
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	# 116	42.0	112
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	106	59.0	111
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	107	23.1	113
EP075I: Organochlorine Pesticides (QCLot: 3355618)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	97.4	63.0	113
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	# 114	57.0	113
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	96.6	61.0	117
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	108	64.0	118
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.1	55.0	115
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	61.0	115
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	88.5	56.0	118
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	118	65.0	125
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	102	60.0	116
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	95.4	64.0	118
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.4	53.0	117
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	112	65.0	115
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.6	62.0	118
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	111	63.0	129
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	98.3	46.0	122
EP075J: Organophosphorus Pesticides (QCLot: 3355618)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	67.7	46.0	112
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	# 122	63.0	119
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	107	68.0	134
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	105	60.0	130
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	119	65.0	127
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	90.4	60.0	116

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075J: Organophosphorus Pesticides (QCLot: 3355618) - continued								
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	106	63.0	113
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	101	65.0	115
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	89.5	59.0	103
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	114	59.0	119
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	102	62.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3352853)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	105	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355620)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.3	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	100	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3352853)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	104	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	97.4	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	91.1	63.0	131
EP080: BTEXN (QCLot: 3352853)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	113	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	103	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	96.6	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	102	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	100	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	76.5	63.0	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3353155)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	72.0	128
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	67.0	130
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	111	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3353155)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	113	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	123	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3353155)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	110	64.0	140

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3353155) - continued								
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	99.2	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	97.6	69.2	143

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3358226)							
ES2038954-022	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	84.7	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	76.8	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	82.9	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	96.9	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	78.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	73.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	72.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3358228)							
ES2038954-022	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	82.2	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3355619)							
ES2039275-001	QC201_20201102	EP068: gamma-BHC	58-89-9	0.5 mg/kg	85.5	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	91.8	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.6	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	90.9	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	100	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	90.4	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619)							
ES2039275-001	QC201_20201102	EP068: Diazinon	333-41-5	0.5 mg/kg	103	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	102	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	85.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	87.3	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	108	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3352854)							
ES2039243-031	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	114	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	103	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3352854)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 3352854) - continued							
ES2039243-031	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	108	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3355621)							
ES2039275-001	QC201_20201102	EP075(SIM): Phenol	108-95-2	10 mg/kg	97.2	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	94.6	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	91.2	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.7	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	86.8	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355621)							
ES2039275-001	QC201_20201102	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.3	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	70.0	130
EP075A: Phenolic Compounds (QCLot: 3355618)							
ES2039275-001	QC201_20201102	EP075: Phenol	108-95-2	10 mg/kg	81.4	60.0	130
		EP075: 2-Chlorophenol	95-57-8	10 mg/kg	92.0	60.0	130
		EP075: 2-Nitrophenol	88-75-5	10 mg/kg	87.0	50.0	130
		EP075: 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	91.9	50.0	130
		EP075: Pentachlorophenol	87-86-5	10 mg/kg	68.6	10.0	130
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355618)							
ES2039275-001	QC201_20201102	EP075: Acenaphthene	83-32-9	10 mg/kg	83.7	50.0	130
		EP075: Pyrene	129-00-0	10 mg/kg	85.1	50.0	130
EP075D: Nitrosamines (QCLot: 3355618)							
ES2039275-001	QC201_20201102	EP075: N-Nitrosodi-n-propylamine	621-64-7	10 mg/kg	90.4	50.0	130
EP075E: Nitroaromatics and Ketones (QCLot: 3355618)							
ES2039275-001	QC201_20201102	EP075: 2.4-Dinitrotoluene	121-14-2	10 mg/kg	83.9	40.0	130
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618)							
ES2039275-001	QC201_20201102	EP075: 1.4-Dichlorobenzene	106-46-7	10 mg/kg	86.9	60.0	130
		EP075: 1.2.4-Trichlorobenzene	120-82-1	10 mg/kg	86.3	50.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3352853)							
ES2039243-031	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355620)							
ES2039275-001	QC201_20201102	EP071: C10 - C14 Fraction	----	523 mg/kg	90.6	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	114	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	114	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3352853)							
ES2039243-031	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	94.1	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620) - continued							
ES2039275-001	QC201_20201102	EP071: >C10 - C16 Fraction	----	860 mg/kg	101	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	114	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	97.3	52.0	132
EP080: BTEXN (QCLot: 3352853)							
ES2039243-031	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	102	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	93.0	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	92.6	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	94.0	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	93.7	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.0	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3353155)							
ES2039275-001	QC201_20201102	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	104	72.0	128
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	95.6	67.0	130
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	120	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3353155)							
ES2039275-001	QC201_20201102	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	107	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	98.4	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	123	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	118	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3353155)							
ES2039275-001	QC201_20201102	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	100	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	112	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	122	69.2	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2039275**	Page	: 1 of 9
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 06-Nov-2020
Site	: ----	Issue Date	: 16-Nov-2020
Sampler	: ----	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Matrix Spike outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

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
Laboratory Control Spike (LCS) Recoveries							
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**N-2-Fluorenyl Acetamide**	53-96-3	118 %	58.0-114%	**Recovery greater than upper control limit**
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**Benz(a)anthracene**	56-55-3	120 %	59.0-115%	**Recovery greater than upper control limit**
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**Chrysene**	218-01-9	121 %	61.0-117%	**Recovery greater than upper control limit**
EP075C: Phthalate Esters	QC-3355618-002	----	**Diethyl phthalate**	84-66-2	121 %	65.0-115%	**Recovery greater than upper control limit**
EP075E: Nitroaromatics and Ketones	QC-3355618-002	----	**Phenacetin**	62-44-2	125 %	62.0-114%	**Recovery greater than upper control limit**
EP075H: Anilines and Benzidines	QC-3355618-002	----	**2-Nitroaniline**	88-74-4	114 %	52.0-112%	**Recovery greater than upper control limit**
EP075H: Anilines and Benzidines	QC-3355618-002	----	**4-Nitroaniline**	100-01-6	116 %	42.0-112%	**Recovery greater than upper control limit**
EP075I: Organochlorine Pesticides	QC-3355618-002	----	**beta-BHC**	319-85-7	114 %	57.0-113%	**Recovery greater than upper control limit**
EP075J: Organophosphorus Pesticides	QC-3355618-002	----	**Dimethoate**	60-51-5	122 %	63.0-119%	**Recovery greater than upper control limit**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
QC201_20201102	**02-Nov-2020**	**----**	----	----	**11-Nov-2020**	16-Nov-2020	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag (EA200)							
QC201_20201102	**02-Nov-2020**	**----**	----	----	**10-Nov-2020**	01-May-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	01-May-2021	✓	**11-Nov-2020**	01-May-2021	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	30-Nov-2020	✓	**12-Nov-2020**	30-Nov-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	09-Nov-2020	✓	**09-Nov-2020**	09-Nov-2020	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓

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
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	16-Nov-2020	✓	**09-Nov-2020**	16-Nov-2020	✓
Soil Glass Jar - Unpreserved (EP071) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	16-Nov-2020	✓	**09-Nov-2020**	16-Nov-2020	✓
Soil Glass Jar - Unpreserved (EP071) QC201_20201102	**02-Nov-2020**	**11-Nov-2020**	16-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	16-Nov-2020	✓	**09-Nov-2020**	16-Nov-2020	✓

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
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	01-May-2021	✓	**10-Nov-2020**	19-Dec-2020	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	01-May-2021	✓	**10-Nov-2020**	19-Dec-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	01-May-2021	✓	**10-Nov-2020**	19-Dec-2020	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
QC201_20201102	**02-Nov-2020**	**09-Nov-2020**	01-May-2021	✓	**10-Nov-2020**	19-Dec-2020	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**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
Pesticides by GCMS	EP068	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	20	**15.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to AS 3550, 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)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2039460**	Page	: 1 of 15
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 09-Nov-2020 13:35
Order number	: ----	Date Analysis Commenced	: 10-Nov-2020
C-O-C number	: ----	Issue Date	: 16-Nov-2020 17:12
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Satishkumar Trivedi	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- ASS: EA029 (SPOCAS): Retained Acidity not required because pH KCl greater than or equal to 4.5
- ASS: EA029 (SPOCAS): Laboratory determinations of ANC needs to be corroborated by effectiveness of the measured ANC in relation to incubation ANC. Unless corroborated, the results of ANC testing should be discounted when determining Net Acidity for comparison with action criteria, or for the determination of the acidity hazard and required liming amounts.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC201_20201104	----	----	----	----
			Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2039460-001	--------	--------	--------	--------
				Result	----	----	----	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	**9.7**	----	----	----	----
pH OX (23B)	----	0.1	pH Unit	**8.0**	----	----	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	----	----	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	----	----	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	<0.020	----	----	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	<0.020	----	----	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	<0.020	----	----	----	----
Peroxide Sulfur (23De)	----	0.020	% S	**0.086**	----	----	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	**0.086**	----	----	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	**53**	----	----	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	**0.211**	----	----	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	**8.80**	----	----	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	**8.59**	----	----	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	**4280**	----	----	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	**6.87**	----	----	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	**0.021**	----	----	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	**0.292**	----	----	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	**0.271**	----	----	----	----
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	**223**	----	----	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	**0.357**	----	----	----	----
EA029-F: Excess Acid Neutralising Capacity								
Excess Acid Neutralising Capacity (23Q)	----	0.020	% CaCO3	**22.8**	----	----	----	----
acidity - Excess Acid Neutralising Capacity (a-23Q)	----	10	mole H+ / t	**4550**	----	----	----	----
sulfidic - Excess Acid Neutralising Capacity (s-23Q)	----	0.020	% S	**7.28**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EA029-F: Excess Acid Neutralising Capacity - Continued									
EA029-H: Acid Base Accounting									
ANC Fineness Factor	----	0.5	-		**1.5**	----	----	----	----
Net Acidity (sulfur units)	----	0.02	% S		<0.02	----	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t		<10	----	----	----	----
Liming Rate	----	1	kg CaCO3/t		<1	----	----	----	----
Net Acidity excluding ANC (sulfur units)	----	0.02	% S		**0.08**	----	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t		**53**	----	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t		**4**	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**3.2**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		<2	----	----	----	----
Copper	7440-50-8	5	mg/kg		<5	----	----	----	----
Lead	7439-92-1	5	mg/kg		**6**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**9**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
Isopropylbenzene	98-82-8	0.5	mg/kg		<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg		<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg		<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg		<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg		<0.5	----	----	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg		<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg		<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg		<0.5	----	----	----	----
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg		<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg		<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg		<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg		<5	----	----	----	----
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg		<0.5	----	----	----	----
EP074D: Fumigants									
2.2-Dichloropropane	594-20-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg		<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg		<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg		<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg		<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg		<5	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg		<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg		<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg		<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg		<5	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg		<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg		<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg		<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg		<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg		<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1-Dichloropropylene	563-58-6	0.5	mg/kg		<0.5	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg		<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg		<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg		<0.5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg		<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg		<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg		<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	----	----	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg		<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)A: Phenolic Compounds - Continued									
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		<0.5	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075A: Phenolic Compounds - Continued									
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	----	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg		<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg		<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg		<1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of PAHs	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5	mg/kg		<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg		<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075C: Phthalate Esters - Continued									
Butyl benzyl phthalate	85-68-7	0.5	mg/kg		<0.5	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg		<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg		<0.5	----	----	----	----
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg		<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg		<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg		<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg		<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5	mg/kg		<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg		<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg		<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg		<0.5	----	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg		<1.0	----	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg		<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg		<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg		<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg		<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg		<1	----	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg		<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg		<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg		<0.5	----	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg		<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg		<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg		<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg		<0.5	----	----	----	----
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC201_20201104	----	----	----	----
			Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2039460-001	--------	--------	--------	--------
				Result	----	----	----	----
EP075F: Haloethers - Continued								
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	----	----	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg	<0.5	----	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	----	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	mg/kg	<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg	<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075I: Organochlorine Pesticides - Continued									
Endrin	72-20-8	0.5	mg/kg		<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg		<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg		<0.5	----	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg		<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg		<0.5	----	----	----	----
Fenthion	55-38-9	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0002**	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0002**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0002**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC201_20201104	----	----	----	----
				Client sampling date / time	04-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2039460-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate - Continued									
Dibromo-DDE	21655-73-2	0.05	%		72.3	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		89.6	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		107	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		109	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		112	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.7	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		87.6	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		68.4	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		92.2	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		89.1	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		88.5	----	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		111	----	----	----	----
Phenol-d6	13127-88-3	0.5	%		112	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		98.1	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		61.8	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		103	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		91.7	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		98.0	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		107	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		111	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		106	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		102	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		114	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		106	----	----	----	----
13C8-PFOA	----	0.0002	%		110	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	29	149
Phenol-d6	13127-88-3	32	128
2-Chlorophenol-D4	93951-73-6	32	128
2.4.6-Tribromophenol	118-79-6	13	121
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	33	125
1.2-Dichlorobenzene-D4	2199-69-1	34	108
2-Fluorobiphenyl	321-60-8	35	121
Anthracene-d10	1719-06-8	35	123
4-Terphenyl-d14	1718-51-0	33	125
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2039460**	Page	: 1 of 23
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 09-Nov-2020
Order number	: ----	Date Analysis Commenced	: 10-Nov-2020
C-O-C number	: ----	Issue Date	: 16-Nov-2020
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Satishkumar Trivedi	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3358230)									
ES2039750-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	16	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	14	14	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	8	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	25	26	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	27	25	6.91	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	60	55	9.94	0% - 50%
ES2039325-007	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	9	0.00	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	24	25	0.00	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	45	44	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	197	181	8.60	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	176	176	0.00	0% - 20%
EA029-A: pH Measurements (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: pH KCl (23A)	----	0.1	pH Unit	5.9	5.9	0.00	0% - 20%
		EA029: pH OX (23B)	----	0.1	pH Unit	3.8	3.8	0.00	0% - 20%
EA029-B: Acidity Trail (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	<2	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA029-B: Acidity Trail (QC Lot: 3362298) - continued									
EB2029361-001	Anonymous	EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	<2	0.00	No Limit
EA029-C: Sulfur Trail (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: Peroxide Sulfur (23De)	----	0.02	% S	0.034	0.034	0.00	No Limit
		EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	0.034	0.034	0.00	No Limit
		EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	21	21	0.00	No Limit
EA029-D: Calcium Values (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	0.051	0.050	2.06	No Limit
		EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	0.060	0.062	4.39	No Limit
		EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	<10	0.00	No Limit
EA029-E: Magnesium Values (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	<0.020	<0.020	0.00	No Limit
		EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	<0.020	<0.020	0.00	No Limit
		EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	<10	0.00	No Limit
EA029-H: Acid Base Accounting (QC Lot: 3362298)									
EB2029361-001	Anonymous	EA029: ANC Fineness Factor	----	0.5	-	1.5	1.5	0.00	No Limit
		EA029: Net Acidity (sulfur units)	----	0.02	% S	0.03	0.03	0.00	No Limit
		EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.03	0.03	0.00	No Limit
		EA029: Liming Rate	----	1	kg CaCO3/t	2	2	0.00	No Limit
		EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	2	2	0.00	No Limit
		EA029: Net Acidity (acidity units)	----	10	mole H+ / t	21	21	0.00	No Limit
		EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	21	21	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3358235)									
ES2039378-023	Anonymous	EA055: Moisture Content	----	0.1	%	20.0	19.0	5.17	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3358229)									
ES2039750-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2039325-007	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3355619)									
ES2039275-001	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3355619) - continued									
ES2039275-001	Anonymous	EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3355619)									
ES2039275-001	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3355869) - continued									
ES2039460-001	QC201_20201104	EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3355869) - continued									
ES2039460-001	QC201_20201104	EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3355869)									
ES2039460-001	QC201_20201104	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3355621)									
ES2039275-001	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355621)									
ES2039275-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355621) - continued									
ES2039275-001	Anonymous	EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075A: Phenolic Compounds (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.00	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3355618) - continued									
ES2039275-001	Anonymous	EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.00	No Limit
EP075C: Phthalate Esters (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075D: Nitrosamines (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075E: Nitroaromatics and Ketones (QC Lot: 3355618) - continued									
ES2039275-001	Anonymous	EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.00	No Limit
EP075F: Haloethers (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.00	No Limit
EP075H: Anilines and Benzidines (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075I: Organochlorine Pesticides (QC Lot: 3355618) - continued									
ES2039275-001	Anonymous	EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
EP075J: Organophosphorus Pesticides (QC Lot: 3355618)									
ES2039275-001	Anonymous	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3355620)									
ES2039275-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3355870)									
ES2039460-001	QC201_20201104	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3355620)									
ES2039275-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3355870)									
ES2039460-001	QC201_20201104	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.00	No Limit
EP080: BTEXN (QC Lot: 3355870)									
ES2039460-001	QC201_20201104	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3355483)									
ES2038954-024	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3355483)									
ES2038954-024	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3355483)									
ES2038954-024	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit

Method Blank (MB) and Laboratory Control Spike (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 Spike (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 (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3358230)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	89.9	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	102	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	93.3	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	95.2	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.1 mg/kg	89.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	88.8	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	74.4	66.0	133
EA029-A: pH Measurements (QCLot: 3362298)								
EA029: pH KCl (23A)	----	0.1	pH Unit	<0.1	4.4 pH Unit	100	70.0	130
EA029: pH OX (23B)	----	0.1	pH Unit	<0.1	4.2 pH Unit	92.8	70.0	130
EA029-B: Acidity Trail (QCLot: 3362298)								
EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	15 mole H+ / t	109	70.0	130
EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	27.5 mole H+ / t	113	70.0	130
EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail (QCLot: 3362298)								
EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	0.04779 % S	92.9	70.0	130
EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	0.20322 % S	98.4	70.0	130
EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	----	----	----	----
EA029-D: Calcium Values (QCLot: 3362298)								
EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	<0.020	0.14152 % Ca	102	70.0	130
EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	<0.020	0.19926 % Ca	97.3	70.0	130
EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	----	----	----	----
EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	----	----	----	----
EA029-E: Magnesium Values (QCLot: 3362298)								
EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	<0.020	0.213 % Mg	96.7	70.0	130
EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	<0.020	0.22344 % Mg	102	70.0	130
EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	----	----	----	----
EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	----	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EA029-F: Excess Acid Neutralising Capacity (QCLot: 3362298)								
EA029: Excess Acid Neutralising Capacity (23Q)	----	0.02	% CaCO3	<0.020	----	----	----	----
EA029: acidity - Excess Acid Neutralising Capacity (a-23Q)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Excess Acid Neutralising Capacity (s-23Q)	----	0.02	% S	<0.020	----	----	----	----
EA029-H: Acid Base Accounting (QCLot: 3362298)								
EA029: ANC Fineness Factor	----	0.5	-	<0.5	----	----	----	----
EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate	----	1	kg CaCO3/t	<1	----	----	----	----
EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3358229)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.073 mg/kg	86.8	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3355619)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	101	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.6	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	100.0	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	97.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.5	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.5	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	106	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.1	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	103	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.4	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	98.2	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	59.0	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619) - continued								
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	77.3	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	99.9	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	87.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.4	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	101	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	86.6	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	95.9	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.8	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	103	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	105	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	68.4	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3355869)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	83.8	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	94.8	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	90.3	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	90.9	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	94.3	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	91.2	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	92.7	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	92.4	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	91.2	59.0	125
EP074B: Oxygenated Compounds (QCLot: 3355869)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	76.5	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	90.5	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	87.7	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	88.8	54.0	136
EP074C: Sulfonated Compounds (QCLot: 3355869)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	106	54.0	126
EP074D: Fumigants (QCLot: 3355869)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	92.4	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	97.9	68.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074D: Fumigants (QCLot: 3355869) - continued								
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	90.5	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	91.0	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	92.6	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3355869)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	81.9	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	116	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	119	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	109	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	116	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	112	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	109	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	79.3	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	95.0	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	100	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	99.9	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	93.2	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	98.7	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	100	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	98.6	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	99.4	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	100	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	96.1	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	98.4	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	101	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	84.4	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	84.4	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	93.9	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	92.8	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	95.4	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	91.9	53.0	129
EP074F: Halogenated Aromatic Compounds (QCLot: 3355869)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	97.6	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	94.5	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	93.8	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	92.8	67.0	123
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	100	52.0	122
EP074G: Trihalomethanes (QCLot: 3355869)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074G: Trihalomethanes (QCLot: 3355869) - continued								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	96.0	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	98.2	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	96.9	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	94.6	60.0	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3355621)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	97.0	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	98.6	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	94.5	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	94.7	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	79.7	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	92.7	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	90.1	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	98.5	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	89.1	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.5	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	86.0	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	26.4	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355621)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	104	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	107	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	91.2	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	105	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	106	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	99.4	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	97.1	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.6	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	97.9	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	89.6	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	97.5	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.7	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	87.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	86.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	88.6	63.0	121
EP075A: Phenolic Compounds (QCLot: 3355618)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.2	64.0	114
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	57.0	115

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075A: Phenolic Compounds (QCLot: 3355618) - continued								
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	107	55.0	117
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	1.5 mg/kg	99.1	46.0	122
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	90.1	47.0	117
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	101	13.7	108
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	89.8	47.0	105
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	92.7	48.0	110
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	97.9	57.0	113
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	83.8	49.0	109
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	81.8	49.0	107
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	3 mg/kg	29.7	12.0	76.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355618)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	94.1	62.0	118
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	108	58.0	116
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	103	54.0	112
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.7	56.0	114
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	89.0	62.0	112
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	101	59.0	115
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	99.9	63.0	113
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	96.1	57.0	111
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	104	58.0	114
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	111	57.0	117
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 118	58.0	114
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	# 120	59.0	115
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	# 121	61.0	117
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	3 mg/kg	92.0	57.0	119
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	83.7	48.1	106
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	95.3	56.0	116
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	86.0	50.0	116
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	93.2	55.0	117
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	53.0	119
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	88.6	56.0	120
EP075C: Phthalate Esters (QCLot: 3355618)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	102	60.0	118
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	# 121	65.0	115
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	104	65.0	121
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	108	62.0	116
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	mg/kg	----	1.5 mg/kg	104	69.0	133
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	91.9	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075D: Nitrosamines (QCLot: 3355618)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	70.8	39.4	124
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	98.5	59.0	117
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	103	53.0	125
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	105	65.0	121
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.8	59.0	123
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	109	57.0	115
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	100	57.0	119
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.6	3 mg/kg	95.9	42.0	112
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	34.2	16.3	123
EP075E: Nitroaromatics and Ketones (QCLot: 3355618)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	75.0	27.3	129
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	60.0	116
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	109	65.0	119
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	108	62.0	116
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	98.6	58.0	118
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	100	59.0	115
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	47.2	18.0	112
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	79.8	10.0	87.0
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.6	48.3	98.5
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	104	62.0	118
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	109	36.0	114
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	# 125	62.0	114
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	78.2	36.1	102
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.3	56.0	110
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	105	54.0	110
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	99.1	48.0	108
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	57.4	112
EP075F: Haloethers (QCLot: 3355618)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	105	63.0	121
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	98.3	59.0	115
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	96.5	58.0	112
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	86.0	58.0	110
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	82.0	58.0	112
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.6	58.0	116
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	57.0	115
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	79.6	54.0	116

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618) - continued								
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	62.9	108
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	39.1	110
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	84.5	59.0	117
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	60.6	24.3	108
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	80.5	57.0	109
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	81.7	59.0	111
EP075H: Anilines and Benzidines (QCLot: 3355618)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	72.2	13.2	108
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	23.4	20.5	99.0
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	# 114	52.0	112
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	83.4	31.5	93.7
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	95.0	60.0	110
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	# 116	42.0	112
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	106	59.0	111
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	107	23.1	113
EP075I: Organochlorine Pesticides (QCLot: 3355618)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	97.4	63.0	113
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	# 114	57.0	113
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	96.6	61.0	117
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	108	64.0	118
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.1	55.0	115
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	95.6	61.0	115
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	88.5	56.0	118
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	118	65.0	125
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	102	60.0	116
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	95.4	64.0	118
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.4	53.0	117
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	112	65.0	115
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	97.6	62.0	118
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	111	63.0	129
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	98.3	46.0	122
EP075J: Organophosphorus Pesticides (QCLot: 3355618)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	67.7	46.0	112
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	# 122	63.0	119
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	107	68.0	134
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	105	60.0	130
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	119	65.0	127
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	90.4	60.0	116

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075J: Organophosphorus Pesticides (QCLot: 3355618) - continued								
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	106	63.0	113
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	101	65.0	115
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	89.5	59.0	103
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	114	59.0	119
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	102	62.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355620)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	94.3	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	100	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355870)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	87.0	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	97.4	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	98.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	91.1	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355870)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	86.8	68.4	128
EP080: BTEXN (QCLot: 3355870)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	97.0	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	93.0	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	86.6	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	90.7	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	89.9	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	72.4	63.0	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3355483)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	72.0	128
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	67.0	130
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3355483)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	103	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3355483)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	64.0	140

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Recovery Limits (%): Low	Recovery Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3355483) - continued								
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	96.0	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	94.0	69.2	143

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Recovery Limits (%): Low	Recovery Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3358230)							
ES2039325-007	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	97.1	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	91.6	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	92.9	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	93.7	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	87.1	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.5	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	91.7	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3358229)							
ES2039325-007	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	81.1	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3355619)							
ES2039275-001	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	85.5	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	91.8	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.6	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	90.9	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	100	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	90.4	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3355619)							
ES2039275-001	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	103	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	102	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	85.8	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	87.3	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	108	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3355869)							
ES2039460-001	QC201_20201104	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	104	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	91.3	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3355869)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 3355869) - continued							
ES2039460-001	QC201_20201104	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	96.6	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3355621)							
ES2039275-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	97.2	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	94.6	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	91.2	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	89.7	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	86.8	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355621)							
ES2039275-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	97.3	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	70.0	130
EP075A: Phenolic Compounds (QCLot: 3355618)							
ES2039275-001	Anonymous	EP075: Phenol	108-95-2	10 mg/kg	81.4	60.0	130
		EP075: 2-Chlorophenol	95-57-8	10 mg/kg	92.0	60.0	130
		EP075: 2-Nitrophenol	88-75-5	10 mg/kg	87.0	50.0	130
		EP075: 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	91.9	50.0	130
		EP075: Pentachlorophenol	87-86-5	10 mg/kg	68.6	10.0	130
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3355618)							
ES2039275-001	Anonymous	EP075: Acenaphthene	83-32-9	10 mg/kg	83.7	50.0	130
		EP075: Pyrene	129-00-0	10 mg/kg	85.1	50.0	130
EP075D: Nitrosamines (QCLot: 3355618)							
ES2039275-001	Anonymous	EP075: N-Nitrosodi-n-propylamine	621-64-7	10 mg/kg	90.4	50.0	130
EP075E: Nitroaromatics and Ketones (QCLot: 3355618)							
ES2039275-001	Anonymous	EP075: 2.4-Dinitrotoluene	121-14-2	10 mg/kg	83.9	40.0	130
EP075G: Chlorinated Hydrocarbons (QCLot: 3355618)							
ES2039275-001	Anonymous	EP075: 1.4-Dichlorobenzene	106-46-7	10 mg/kg	86.9	60.0	130
		EP075: 1.2.4-Trichlorobenzene	120-82-1	10 mg/kg	86.3	50.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355620)							
ES2039275-001	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	90.6	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	114	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	114	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3355870)							
ES2039460-001	QC201_20201104	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.8	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620)							
ES2039275-001	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	101	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	114	53.0	131

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355620) - continued							
ES2039275-001	Anonymous	EP071: >C34 - C40 Fraction	----	1058 mg/kg	97.3	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3355870)							
ES2039460-001	QC201_20201104	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	93.2	70.0	130
EP080: BTEXN (QCLot: 3355870)							
ES2039460-001	QC201_20201104	EP080: Benzene	71-43-2	2.5 mg/kg	104	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	100	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	98.9	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	102	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	106	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	88.9	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3355483)							
ES2038954-024	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	86.4	72.0	128
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	93.2	67.0	130
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	94.0	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3355483)							
ES2038954-024	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	99.2	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	98.8	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	103	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	102	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3355483)							
ES2038954-024	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	92.8	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	105	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	105	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	102	69.2	143

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2039460**	Page	: 1 of 10
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Tristan Rodrigues	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project	Date Samples Received	: 09-Nov-2020
Site	: ----	Issue Date	: 16-Nov-2020
Sampler	: ----	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Matrix Spike outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : 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
Laboratory Control Spike (LCS) Recoveries							
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**N-2-Fluorenyl Acetamide**	53-96-3	118 %	58.0-114%	**Recovery greater than upper control limit**
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**Benz(a)anthracene**	56-55-3	120 %	59.0-115%	**Recovery greater than upper control limit**
EP075B: Polynuclear Aromatic Hydrocarbons	QC-3355618-002	----	**Chrysene**	218-01-9	121 %	61.0-117%	**Recovery greater than upper control limit**
EP075C: Phthalate Esters	QC-3355618-002	----	**Diethyl phthalate**	84-66-2	121 %	65.0-115%	**Recovery greater than upper control limit**
EP075E: Nitroaromatics and Ketones	QC-3355618-002	----	**Phenacetin**	62-44-2	125 %	62.0-114%	**Recovery greater than upper control limit**
EP075H: Anilines and Benzidines	QC-3355618-002	----	**2-Nitroaniline**	88-74-4	114 %	52.0-112%	**Recovery greater than upper control limit**
EP075H: Anilines and Benzidines	QC-3355618-002	----	**4-Nitroaniline**	100-01-6	116 %	42.0-112%	**Recovery greater than upper control limit**
EP075I: Organochlorine Pesticides	QC-3355618-002	----	**beta-BHC**	319-85-7	114 %	57.0-113%	**Recovery greater than upper control limit**
EP075J: Organophosphorus Pesticides	QC-3355618-002	----	**Dimethoate**	60-51-5	122 %	63.0-119%	**Recovery greater than upper control limit**

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
Moisture Content	1	12	8.33	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / ***Container*** / Client Sample ID(s)	***Sample Date***	*Extraction / Preparation*			*Analysis*		
		Date extracted	Due for extraction	Evaluation	***Date analysed***	Due for analysis	Evaluation

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA029-A: pH Measurements							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-B: Acidity Trail							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-C: Sulfur Trail							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-D: Calcium Values							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-E: Magnesium Values							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-F: Excess Acid Neutralising Capacity							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-G: Retained Acidity							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA029-H: Acid Base Accounting							
Snap Lock Bag - frozen on receipt at ALS (EA029) QC201_20201104	**04-Nov-2020**	**16-Nov-2020**	31-Jul-2023	✓	**16-Nov-2020**	14-Feb-2021	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) QC201_20201104	**04-Nov-2020**	**----**	----	----	**11-Nov-2020**	18-Nov-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	03-May-2021	✓	**11-Nov-2020**	03-May-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	02-Dec-2020	✓	**12-Nov-2020**	02-Dec-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓

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
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	11-Nov-2020	✓	**11-Nov-2020**	11-Nov-2020	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓

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
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**13-Nov-2020**	21-Dec-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	18-Nov-2020	✓	**11-Nov-2020**	18-Nov-2020	✓
Soil Glass Jar - Unpreserved (EP071) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	18-Nov-2020	✓	**11-Nov-2020**	18-Nov-2020	✓
Soil Glass Jar - Unpreserved (EP071) QC201_20201104	**04-Nov-2020**	**11-Nov-2020**	18-Nov-2020	✓	**12-Nov-2020**	21-Dec-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	18-Nov-2020	✓	**11-Nov-2020**	18-Nov-2020	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	03-May-2021	✓	**11-Nov-2020**	20-Dec-2020	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	03-May-2021	✓	**11-Nov-2020**	20-Dec-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	03-May-2021	✓	**11-Nov-2020**	20-Dec-2020	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
QC201_20201104	**04-Nov-2020**	**10-Nov-2020**	03-May-2021	✓	**11-Nov-2020**	20-Dec-2020	✓

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	1	12	**8.33**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	5	**20.00**	**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
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	5	**20.00**	**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
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	5	**20.00**	**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
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	2	**50.00**	**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
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	In house: Referenced to Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
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 AS 3550, 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)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2040839**	Page	: 1 of 15
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Mr Ian Batterley	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project, La Perouse	Date Samples Received	: 18-Nov-2020 13:15
Order number	: ----	Date Analysis Commenced	: 20-Nov-2020
C-O-C number	: ----	Issue Date	: 27-Nov-2020 15:26
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- ASS: EA029 (SPOCAS): Retained Acidity not required because pH KCl greater than or equal to 4.5
- ASS: EA029 (SPOCAS): Excess ANC not required because pH OX less than 6.5.
- EP075: Where reported, 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- ASS: EA029 (SPOCAS): Liming rate is calculated and reported on a dry weight basis assuming use of fine agricultural lime (CaCO3) and using a safety factor of 1.5 to allow for non-homogeneous mixing and poor reactivity of lime. For conversion of Liming Rate from kg/t dry weight to kg/m3 in-situ soil, multiply reported results x wet bulk density of soil in t/m3.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS (Australian HEPA) and also conform to QSM 5.3 (US DoD) requirements.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EA029-A: pH Measurements								
pH KCl (23A)	----	0.1	pH Unit	**5.4**	----	----	----	----
pH OX (23B)	----	0.1	pH Unit	**3.9**	----	----	----	----
EA029-B: Acidity Trail								
Titratable Actual Acidity (23F)	----	2	mole H+ / t	**4**	----	----	----	----
Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	----	----	----	----
Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
sulfidic - Titratable Actual Acidity (s-23F)	----	0.020	% pyrite S	<0.020	----	----	----	----
sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.020	% pyrite S	<0.020	----	----	----	----
sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.020	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail								
KCl Extractable Sulfur (23Ce)	----	0.020	% S	<0.020	----	----	----	----
Peroxide Sulfur (23De)	----	0.020	% S	<0.020	----	----	----	----
Peroxide Oxidisable Sulfur (23E)	----	0.020	% S	<0.020	----	----	----	----
acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	----	----	----	----
EA029-D: Calcium Values								
KCl Extractable Calcium (23Vh)	----	0.020	% Ca	<0.020	----	----	----	----
Peroxide Calcium (23Wh)	----	0.020	% Ca	<0.020	----	----	----	----
Acid Reacted Calcium (23X)	----	0.020	% Ca	<0.020	----	----	----	----
acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	----	----	----	----
sulfidic - Acid Reacted Calcium (s-23X)	----	0.020	% S	<0.020	----	----	----	----
EA029-E: Magnesium Values								
KCl Extractable Magnesium (23Sm)	----	0.020	% Mg	<0.020	----	----	----	----
Peroxide Magnesium (23Tm)	----	0.020	% Mg	<0.020	----	----	----	----
Acid Reacted Magnesium (23U)	----	0.020	% Mg	<0.020	----	----	----	----
Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	----	----	----	----
sulfidic - Acid Reacted Magnesium (s-23U)	----	0.020	% S	<0.020	----	----	----	----
EA029-H: Acid Base Accounting								
ANC Fineness Factor	----	0.5	-	**1.5**	----	----	----	----
Net Acidity (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
Net Acidity (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
Liming Rate	----	1	kg CaCO3/t	<1	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EA029-H: Acid Base Accounting - Continued								
Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**12.5**	----	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	<2	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	**20**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**7**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued								
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	----	----	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	----	----	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	----	----	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	----	----	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	----	----	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	----	----	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	----	----	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	----	----	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	----	----	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	----	----	----	----
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	----	----	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	----	----	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	----	----	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	----	----	----	----
Chloromethane	74-87-3	5	mg/kg	<5	----	----	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	----	----	----	----
Bromomethane	74-83-9	5	mg/kg	<5	----	----	----	----
Chloroethane	75-00-3	5	mg/kg	<5	----	----	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	----	----	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	----	----	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	----	----	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	----	----	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	----	----	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	----	----	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	----	----	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	----	----	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	----	----	----	----
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	----	----	----	----
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	----	----	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	----	----	----	----
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	----	----	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	----	----	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	----	----	----	----
Bromoform	75-25-2	0.5	mg/kg	<0.5	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg	<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg	**0.6**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg	**1.2**	----	----	----	----
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	1	mg/kg	<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	----	----	----	----
2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	----	----	----	----
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	----	----	----	----
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	----	----	----	----
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	----	----	----	----
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	----	----	----	----
Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	----	----	----	----
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	----	----	----	----
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	----	----	----	----
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<5.0	----	----	----	----
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	----	----	----	----
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP075D: Nitrosamines - Continued								
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<1.0	----	----	----	----
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	----	----	----	----
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<1.0	----	----	----	----
Methapyrilene	91-80-5	0.5	mg/kg	<0.5	----	----	----	----
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<0.5	----	----	----	----
Acetophenone	98-86-2	0.5	mg/kg	<0.5	----	----	----	----
Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	----	----	----	----
Isophorone	78-59-1	0.5	mg/kg	<0.5	----	----	----	----
2.6-Dinitrotoluene	606-20-2	1.0	mg/kg	<1.0	----	----	----	----
2.4-Dinitrotoluene	121-14-2	1.0	mg/kg	<1.0	----	----	----	----
1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	----	----	----	----
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	----	----	----	----
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	----	----	----	----
Azobenzene	103-33-3	1	mg/kg	<1	----	----	----	----
1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	----	----	----	----
Phenacetin	62-44-2	0.5	mg/kg	<0.5	----	----	----	----
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	----	----	----	----
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	----	----	----	----
Pronamide	23950-58-5	0.5	mg/kg	<0.5	----	----	----	----
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	----	----	----	----
Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	----	----	----	----
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	----	----	----	----
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	----	----	----	----
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	----	----	----	----
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	----	----	----	----
EP075G: Chlorinated Hydrocarbons								
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QC201_20201111	----	----	----	----
			Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2040839-001	--------	--------	--------	--------
				Result	----	----	----	----
EP075G: Chlorinated Hydrocarbons - Continued								
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	----	----	----	----
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	----	----	----	----
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	----	----	----	----
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<0.5	----	----	----	----
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	----	----	----	----
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	----	----	----	----
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	----	----	----	----
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	----	----	----	----
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	----	----	----	----
Carbazole	86-74-8	0.5	mg/kg	<0.5	----	----	----	----
3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	----	----	----	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	----	----	----	----
beta-BHC	319-85-7	0.5	mg/kg	<0.5	----	----	----	----
gamma-BHC	58-89-9	0.5	mg/kg	<0.5	----	----	----	----
delta-BHC	319-86-8	0.5	mg/kg	<0.5	----	----	----	----
Heptachlor	76-44-8	0.5	mg/kg	<0.5	----	----	----	----
Aldrin	309-00-2	0.5	mg/kg	<0.5	----	----	----	----
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	----	----	----	----
alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	----	----	----	----
Dieldrin	60-57-1	0.5	mg/kg	<0.5	----	----	----	----
Endrin	72-20-8	0.5	mg/kg	<0.5	----	----	----	----
beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	----	----	----	----
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	----	----	----	----
4.4`-DDT	50-29-3	1.0	mg/kg	<1.0	----	----	----	----
EP075J: Organophosphorus Pesticides								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC201_20201111	----	----	----	----
				Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2040839-001	--------	--------	--------	--------
					Result	----	----	----	----
EP075J: Organophosphorus Pesticides - Continued									
Dichlorvos	62-73-7	0.5	mg/kg		<0.5	----	----	----	----
Dimethoate	60-51-5	0.5	mg/kg		<0.5	----	----	----	----
Diazinon	333-41-5	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg		<0.5	----	----	----	----
Malathion	121-75-5	0.5	mg/kg		<0.5	----	----	----	----
Fenthion	55-38-9	0.5	mg/kg		<0.5	----	----	----	----
Chlorpyrifos	2921-88-2	0.5	mg/kg		<0.5	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.5	mg/kg		<0.5	----	----	----	----
Chlorfenvinphos	470-90-6	0.5	mg/kg		<0.5	----	----	----	----
Prothiofos	34643-46-4	0.5	mg/kg		<0.5	----	----	----	----
Ethion	563-12-2	0.5	mg/kg		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC201_20201111	----	----	----	----
				Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2040839-001	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN - Continued									
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		**0.0006**	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0006**	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0006**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**76.8**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**61.5**	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**88.4**	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		**97.1**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QC201_20201111	----	----	----	----
				Sampling date / time	11-Nov-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2040839-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074S: VOC Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.5	%		97.2	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.0	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		87.5	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		66.0	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		101	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		94.7	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		93.6	----	----	----	----
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.5	%		112	----	----	----	----
Phenol-d6	13127-88-3	0.5	%		109	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		97.9	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		62.1	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.5	%		107	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.5	%		86.6	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.5	%		95.7	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		99.1	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		88.2	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		99.6	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		111	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		108	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		110	----	----	----	----
13C8-PFOA	----	0.0002	%		108	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	29	149
Phenol-d6	13127-88-3	32	128
2-Chlorophenol-D4	93951-73-6	32	128
2.4.6-Tribromophenol	118-79-6	13	121
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	33	125
1.2-Dichlorobenzene-D4	2199-69-1	34	108
2-Fluorobiphenyl	321-60-8	35	121
Anthracene-d10	1719-06-8	35	123
4-Terphenyl-d14	1718-51-0	33	125
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

QUALITY CONTROL REPORT

Work Order	: **ES2040839**	Page	: 1 of 24
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Mr Ian Batterley	Contact	: Loren Schiavon
Address	: Unit 11/277 Lane Cove Road Macquarie Park 213	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project, La Perouse	Date Samples Received	: 18-Nov-2020
Order number	: ----	Date Analysis Commenced	: 20-Nov-2020
C-O-C number	: ----	Issue Date	: 27-Nov-2020
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ben Felgendrejeris	Senior Acid Sulfate Soil Chemist	Brisbane Acid Sulphate Soils, Stafford, QLD
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3382678)									
ES2041170-004	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	15	13.9	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	17	16	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	11	7	35.2	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	30	27	9.55	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	26	24	8.66	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	55	51	7.85	0% - 50%
ES2041131-002	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.00	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	18	20	10.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.00	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.00	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	23	7.55	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	6	6	0.00	No Limit
EA029-A: pH Measurements (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: pH KCl (23A)	----	0.1	pH Unit	9.0	9.1	1.10	0% - 20%
		EA029: pH OX (23B)	----	0.1	pH Unit	9.3	9.1	2.17	0% - 20%
EM2020394-009	Anonymous	EA029: pH KCl (23A)	----	0.1	pH Unit	6.3	6.3	0.00	0% - 20%
		EA029: pH OX (23B)	----	0.1	pH Unit	5.3	5.7	7.27	0% - 20%
EA029-B: Acidity Trail (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	<0.020	0.00	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 (%)*	*Recovery Limits (%)*
EA029-B: Acidity Trail (QC Lot: 3380776) - continued									
EB2030646-001	Anonymous	EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	<2	0.00	No Limit
EM2020394-009	Anonymous	EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	<0.020	0.00	No Limit
		EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	<2	0.00	No Limit
		EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	<2	0.00	No Limit
EA029-C: Sulfur Trail (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	<10	0.00	No Limit
EM2020394-009	Anonymous	EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: Peroxide Sulfur (23De)	----	0.02	% S	0.047	0.046	0.00	No Limit
		EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	0.047	0.046	0.00	No Limit
		EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	29	29	0.00	No Limit
EA029-D: Calcium Values (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	0.241	0.227	5.93	0% - 50%
		EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	14.7	14.8	0.792	0% - 20%
		EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	14.4	14.6	0.901	0% - 20%
		EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	11.5	11.6	0.901	0% - 20%
		EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	7200	7260	0.901	0% - 20%
EM2020394-009	Anonymous	EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	0.262	0.237	9.85	0% - 50%
		EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	0.173	0.167	3.86	No Limit
		EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	<0.020	0.00	No Limit
		EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	<0.020	0.00	No Limit
		EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	<10	0.00	No Limit
EA029-E: Magnesium Values (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	0.022	0.021	7.13	No Limit
		EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	0.076	0.082	7.36	No Limit
		EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	0.054	0.061	12.8	No Limit
		EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	0.071	0.080	12.8	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 (%)*	*Recovery Limits (%)*
EA029-E: Magnesium Values (QC Lot: 3380776) - continued									
EB2030646-001	Anonymous	EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	44	50	12.8	No Limit
EM2020394-009	Anonymous	EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	0.039	0.038	0.00	No Limit
		EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	0.057	0.059	3.07	No Limit
		EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	0.021	5.20	No Limit
		EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	0.025	0.028	11.3	No Limit
		EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	15	17	11.3	No Limit
EA029-H: Acid Base Accounting (QC Lot: 3380776)									
EB2030646-001	Anonymous	EA029: ANC Fineness Factor	----	0.5	-	1.5	1.5	0.00	No Limit
		EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	<0.02	0.00	No Limit
		EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	<0.02	0.00	No Limit
		EA029: Liming Rate	----	1	kg CaCO3/t	<1	<1	0.00	No Limit
		EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	<1	0.00	No Limit
		EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	<10	0.00	No Limit
		EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	<10	0.00	No Limit
EM2020394-009	Anonymous	EA029: ANC Fineness Factor	----	0.5	-	1.5	1.5	0.00	No Limit
		EA029: Net Acidity (sulfur units)	----	0.02	% S	0.05	0.05	0.00	No Limit
		EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	0.05	0.05	0.00	No Limit
		EA029: Liming Rate	----	1	kg CaCO3/t	2	2	0.00	No Limit
		EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	2	2	0.00	No Limit
		EA029: Net Acidity (acidity units)	----	10	mole H+ / t	29	29	0.00	No Limit
		EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	29	29	0.00	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3382681)									
ES2041131-002	Anonymous	EA055: Moisture Content	----	0.1	%	3.4	3.1	8.52	No Limit
ES2041170-011	Anonymous	EA055: Moisture Content	----	0.1	%	23.8	22.7	4.53	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3382677)									
ES2041170-004	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
ES2041131-002	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.00	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3375818)									
ES2041120-021	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3375818) - continued									
ES2041120-021	Anonymous	EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3375818)									
ES2041120-021	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.00	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: Styrene	100-42-5	0.5	mg/kg	2.3	2.6	9.76	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	0.5	0.6	0.00	No Limit
		EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	1.0	1.0	0.00	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	3.1	3.4	9.87	No Limit
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.00	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 (%)*	*Recovery Limits (%)*
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 3379791) - continued									
ES2041243-001	Anonymous	EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	0.5	0.00	No Limit
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074B: Oxygenated Compounds (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.00	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.00	No Limit
EP074C: Sulfonated Compounds (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074D: Fumigants (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.00	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 (%)	Recovery Limits (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3379791) - continued									
ES2041243-001	Anonymous	EP074: Vinyl chloride	75-01-4	5	mg/kg	<4	<4	0.00	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.00	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.00	No Limit
EP074F: Halogenated Aromatic Compounds (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP074G: Trihalomethanes (QC Lot: 3379791)									
ES2041243-001	Anonymous	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3375816)									
ES2041120-021	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.00	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.00	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3375816)									
ES2041120-021	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	0.8	0.6	24.6	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	2.1	2.0	6.03	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	2.3	2.2	6.12	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	1.0	0.8	16.5	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.9	0.8	0.00	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 (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3375816) - continued									
ES2041120-021	Anonymous	EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	1.0	1.1	0.00	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	0.5	0.00	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	1.1	1.0	0.00	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	0.8	0.7	15.6	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	0.9	0.7	21.5	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	10.9	10.4	4.69	0% - 20%
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	1.4	1.3	0.00	No Limit
EP075A: Phenolic Compounds (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.00	No Limit
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.5	0.00	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	1.0	1.2	19.5	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	1.1	1.2	10.2	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	0.6	0.5	0.00	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	0.6	<0.5	19.4	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.00	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 (%)*	*Recovery Limits (%)*
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3375817) - continued									
ES2041120-021	Anonymous	EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.00	No Limit
EP075C: Phthalate Esters (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075D: Nitrosamines (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.00	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 (%)*	*Recovery Limits (%)*
EP075F: Haloethers (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<2.5	0.00	No Limit
EP075H: Anilines and Benzidines (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.00	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP075I: Organochlorine Pesticides (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.00	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 (%)	Recovery Limits (%)
EP075J: Organophosphorus Pesticides (QC Lot: 3375817)									
ES2041120-021	Anonymous	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3375815)									
ES2041120-021	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3379792)									
ES2041243-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	14	15	8.60	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3375815)									
ES2041120-021	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	120	100	10.5	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.00	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.00	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3379792)									
ES2041243-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	33	36	7.99	No Limit
EP080: BTEXN (QC Lot: 3379792)									
ES2041243-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.00	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	0.5	0.6	0.00	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	1.0	1.1	0.00	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	1.8	1.9	8.39	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	0.9	1.0	0.00	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.00	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3374581)									
EP2012671-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0024	0.0028	16.4	0% - 50%
EP2012673-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3374581)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3374581) - continued									
EP2012671-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP2012673-002	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.00	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.00	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3374581)									
EP2012671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
EP2012673-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.00	No Limit

Method Blank (MB) and Laboratory Control Spike (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 Spike (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 (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3382678)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	112	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	81.9	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	20.2 mg/kg	97.0	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	109	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	62.1 mg/kg	104	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.4 mg/kg	107	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	162 mg/kg	87.1	66.0	133
EA029-A: pH Measurements (QCLot: 3380776)								
EA029: pH KCl (23A)	----	0.1	pH Unit	<0.1	4.4 pH Unit	100	70.0	130
EA029: pH OX (23B)	----	0.1	pH Unit	<0.1	4.2 pH Unit	105	70.0	130
EA029-B: Acidity Trail (QCLot: 3380776)								
EA029: Titratable Actual Acidity (23F)	----	2	mole H+ / t	<2	15 mole H+ / t	105	70.0	130
EA029: Titratable Peroxide Acidity (23G)	----	2	mole H+ / t	<2	27.5 mole H+ / t	122	70.0	130
EA029: Titratable Sulfidic Acidity (23H)	----	2	mole H+ / t	<2	----	----	----	----
EA029: sulfidic - Titratable Actual Acidity (s-23F)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Peroxide Acidity (s-23G)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029: sulfidic - Titratable Sulfidic Acidity (s-23H)	----	0.02	% pyrite S	<0.020	----	----	----	----
EA029-C: Sulfur Trail (QCLot: 3380776)								
EA029: KCl Extractable Sulfur (23Ce)	----	0.02	% S	<0.020	0.04779 % S	100	70.0	130
EA029: Peroxide Sulfur (23De)	----	0.02	% S	<0.020	0.20322 % S	105	70.0	130
EA029: Peroxide Oxidisable Sulfur (23E)	----	0.02	% S	<0.020	----	----	----	----
EA029: acidity - Peroxide Oxidisable Sulfur (a-23E)	----	10	mole H+ / t	<10	----	----	----	----
EA029-D: Calcium Values (QCLot: 3380776)								
EA029: KCl Extractable Calcium (23Vh)	----	0.02	% Ca	<0.020	0.14152 % Ca	81.4	70.0	130
EA029: Peroxide Calcium (23Wh)	----	0.02	% Ca	<0.020	0.19926 % Ca	104	70.0	130
EA029: Acid Reacted Calcium (23X)	----	0.02	% Ca	<0.020	----	----	----	----
EA029: acidity - Acid Reacted Calcium (a-23X)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Calcium (s-23X)	----	0.02	% S	<0.020	----	----	----	----
EA029-E: Magnesium Values (QCLot: 3380776)								
EA029: KCl Extractable Magnesium (23Sm)	----	0.02	% Mg	<0.020	0.213 % Mg	102	70.0	130
EA029: Peroxide Magnesium (23Tm)	----	0.02	% Mg	<0.020	0.22344 % Mg	110	70.0	130
EA029: Acid Reacted Magnesium (23U)	----	0.02	% Mg	<0.020	----	----	----	----
EA029: Acidity - Acid Reacted Magnesium (a-23U)	----	10	mole H+ / t	<10	----	----	----	----
EA029: sulfidic - Acid Reacted Magnesium (s-23U)	----	0.02	% S	<0.020	----	----	----	----

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EA029-H: Acid Base Accounting (QCLot: 3380776)								
EA029: ANC Fineness Factor	----	0.5	-	<0.5	----	----	----	----
EA029: Net Acidity (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate	----	1	kg CaCO3/t	<1	----	----	----	----
EA029: Net Acidity excluding ANC (sulfur units)	----	0.02	% S	<0.02	----	----	----	----
EA029: Net Acidity excluding ANC (acidity units)	----	10	mole H+ / t	<10	----	----	----	----
EA029: Liming Rate excluding ANC	----	1	kg CaCO3/t	<1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3382677)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.073 mg/kg	100	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3375818)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	98.7	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	96.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.7	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.3	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	95.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.5	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	93.0	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.7	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.0	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	79.0	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	92.0	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3375818)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	108	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	100.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.3	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	72.0	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3375818) - continued								
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	85.6	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.3	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.6	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	83.2	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.7	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.6	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	94.4	41.0	123
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 3379791)								
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	91.8	67.0	113
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	93.8	65.0	117
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	97.1	66.0	122
EP074: 1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	95.9	68.0	118
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	98.4	69.0	119
EP074: 1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	95.6	69.0	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	97.7	69.0	115
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	96.4	66.0	118
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	98.1	59.0	125
EP074B: Oxygenated Compounds (QCLot: 3379791)								
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	90.6	29.6	156
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	92.5	58.0	136
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	88.1	62.0	132
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	86.9	54.0	136
EP074C: Sulfonated Compounds (QCLot: 3379791)								
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	98.9	54.0	126
EP074D: Fumigants (QCLot: 3379791)								
EP074: 2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	95.5	60.0	126
EP074: 1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	94.7	68.0	124
EP074: cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	94.8	51.0	119
EP074: trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	92.2	52.0	114
EP074: 1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	93.0	63.0	115
EP074E: Halogenated Aliphatic Compounds (QCLot: 3379791)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	98.0	30.0	148

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3379791) - continued								
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	106	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	104	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	103	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	101	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	100	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	99.9	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	91.6	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	97.1	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	95.8	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	96.5	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	97.6	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	98.5	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	96.3	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	95.6	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	97.8	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	95.4	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	91.7	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	92.4	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	90.5	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	90.9	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	95.5	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	92.1	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	94.1	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	87.8	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	97.1	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	93.5	53.0	129
EP074F: Halogenated Aromatic Compounds (QCLot: 3379791)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	96.0	68.0	116
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	97.4	70.0	114
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	96.2	68.0	122
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	97.9	67.0	123
EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	96.4	52.0	122
EP074G: Trihalomethanes (QCLot: 3379791)								
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	98.3	66.0	124
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	94.2	61.0	121
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	90.7	63.0	121
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	88.1	60.0	126
EP075(SIM)A: Phenolic Compounds (QCLot: 3375816)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 3375816) - continued								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	87.5	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	93.4	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	87.1	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	91.0	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	60.9	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	88.2	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	87.6	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	90.6	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	80.8	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	83.8	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	83.3	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	42.0	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3375816)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	94.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	91.4	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	91.9	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	94.3	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	95.6	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	97.7	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	95.1	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	95.2	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	87.7	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	92.6	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	86.2	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	91.0	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	86.9	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	81.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	82.0	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	83.8	63.0	121
EP075A: Phenolic Compounds (QCLot: 3375817)								
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	92.5	64.0	114
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	91.7	57.0	115
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.3	55.0	117
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<0.5	1.5 mg/kg	90.5	46.0	122
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	86.4	47.0	117
EP075: 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	91.7	13.7	108
EP075: 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	86.2	47.0	105
EP075: 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	88.6	48.0	110

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075A: Phenolic Compounds (QCLot: 3375817) - continued								
EP075: 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.5	57.0	113
EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	85.8	49.0	109
EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	81.7	49.0	107
EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	3 mg/kg	28.6	12.0	76.0
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3375817)								
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	94.0	62.0	118
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	1.5 mg/kg	89.6	58.0	116
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	1.5 mg/kg	101	54.0	112
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.6	56.0	114
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	90.3	62.0	112
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.7	59.0	115
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	90.5	63.0	113
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	96.8	57.0	111
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	93.3	58.0	114
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	94.3	57.0	117
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	1.5 mg/kg	102	58.0	114
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	97.8	59.0	115
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	97.8	61.0	117
EP075: Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	3 mg/kg	94.2	57.0	119
EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	1.5 mg/kg	88.8	48.1	106
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	94.9	56.0	116
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	1.5 mg/kg	79.8	50.0	116
EP075: Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	87.2	55.0	117
EP075: Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	86.4	53.0	119
EP075: Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	87.1	56.0	120
EP075C: Phthalate Esters (QCLot: 3375817)								
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	1.5 mg/kg	95.4	60.0	118
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	1.5 mg/kg	93.9	65.0	115
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	1.5 mg/kg	91.4	65.0	121
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	1.5 mg/kg	96.0	62.0	116
EP075: bis(2-ethylhexyl) phthalate	117-81-7	----	mg/kg	----	1.5 mg/kg	88.8	69.0	133
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	1.5 mg/kg	91.0	62.0	124
EP075D: Nitrosamines (QCLot: 3375817)								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	1.5 mg/kg	77.1	39.4	124
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	1.5 mg/kg	89.0	59.0	117
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.2	53.0	125
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	1.5 mg/kg	90.6	65.0	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075D: Nitrosamines (QCLot: 3375817) - continued								
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.9	59.0	123
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	1.5 mg/kg	91.2	57.0	115
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	1.5 mg/kg	93.5	57.0	119
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<0.6	3 mg/kg	93.6	42.0	112
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	1.5 mg/kg	27.2	16.3	123
EP075E: Nitroaromatics and Ketones (QCLot: 3375817)								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	1.5 mg/kg	73.8	27.3	129
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	1.5 mg/kg	92.2	60.0	116
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	1.5 mg/kg	90.5	65.0	119
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	1.5 mg/kg	88.7	62.0	116
EP075: 2.6-Dinitrotoluene	606-20-2	0.5	mg/kg	<0.5	1.5 mg/kg	96.3	58.0	118
EP075: 2.4-Dinitrotoluene	121-14-2	0.5	mg/kg	<0.5	1.5 mg/kg	90.9	59.0	115
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	1.5 mg/kg	62.3	18.0	112
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	1.5 mg/kg	85.5	10.0	87.0
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	48.3	98.5
EP075: Azobenzene	103-33-3	1	mg/kg	<1	1.5 mg/kg	92.7	62.0	118
EP075: 1.3.5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	1.5 mg/kg	88.7	36.0	114
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	1.5 mg/kg	110	62.0	114
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	1.5 mg/kg	82.1	36.1	102
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	1.5 mg/kg	91.1	56.0	110
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	1.5 mg/kg	91.7	54.0	110
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	1.5 mg/kg	95.8	48.0	108
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	1.5 mg/kg	94.3	57.4	112
EP075F: Haloethers (QCLot: 3375817)								
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	1.5 mg/kg	97.5	63.0	121
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	1.5 mg/kg	89.1	59.0	115
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	1.5 mg/kg	89.9	58.0	112
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	91.8	58.0	110
EP075G: Chlorinated Hydrocarbons (QCLot: 3375817)								
EP075: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1.5 mg/kg	90.1	58.0	112
EP075: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.0	58.0	116
EP075: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1.5 mg/kg	93.2	57.0	115
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	1.5 mg/kg	92.3	54.0	116
EP075: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1.5 mg/kg	94.1	62.9	108
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	1.5 mg/kg	89.4	39.1	110
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1.5 mg/kg	89.7	59.0	117
EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	1.5 mg/kg	64.0	24.3	108

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075G: Chlorinated Hydrocarbons (QCLot: 3375817) - continued								
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	1.5 mg/kg	89.6	57.0	109
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<0.5	1.5 mg/kg	96.0	59.0	111
EP075H: Anilines and Benzidines (QCLot: 3375817)								
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	1.5 mg/kg	85.4	13.2	108
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	1.5 mg/kg	59.6	20.5	99.0
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<0.5	1.5 mg/kg	93.3	52.0	112
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<0.5	1.5 mg/kg	87.4	31.5	93.7
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	1.5 mg/kg	90.8	60.0	110
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	1.5 mg/kg	106	42.0	112
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.5	59.0	111
EP075: 3.3`-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	1.5 mg/kg	92.4	23.1	113
EP075I: Organochlorine Pesticides (QCLot: 3375817)								
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	1.5 mg/kg	91.8	63.0	113
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	1.5 mg/kg	91.3	57.0	113
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	1.5 mg/kg	84.9	61.0	117
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.6	64.0	118
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	1.5 mg/kg	90.6	55.0	115
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	1.5 mg/kg	89.2	61.0	115
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	1.5 mg/kg	93.4	56.0	118
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	1.5 mg/kg	92.9	65.0	125
EP075: 4.4`-DDE	72-55-9	0.5	mg/kg	<0.5	1.5 mg/kg	91.6	60.0	116
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	1.5 mg/kg	93.6	64.0	118
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	1.5 mg/kg	91.7	53.0	117
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	1.5 mg/kg	99.5	65.0	115
EP075: 4.4`-DDD	72-54-8	0.5	mg/kg	<0.5	1.5 mg/kg	96.1	62.0	118
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	1.5 mg/kg	103	63.0	129
EP075: 4.4`-DDT	50-29-3	0.5	mg/kg	<0.5	1.5 mg/kg	95.0	46.0	122
EP075J: Organophosphorus Pesticides (QCLot: 3375817)								
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	93.7	46.0	112
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	1.5 mg/kg	104	63.0	119
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	1.5 mg/kg	93.4	68.0	134
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	1.5 mg/kg	97.2	60.0	130
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	107	65.0	127
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	1.5 mg/kg	96.4	60.0	116
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	1.5 mg/kg	94.4	63.0	113
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	1.5 mg/kg	93.2	65.0	115
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	1.5 mg/kg	87.4	59.0	103
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	1.5 mg/kg	98.7	59.0	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075J: Organophosphorus Pesticides (QCLot: 3375817) - continued								
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	1.5 mg/kg	101	62.0	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3375815)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	112	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	109	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	110	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3379792)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	122	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3375815)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	103	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	113	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	104	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3379792)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	120	68.4	128
EP080: BTEXN (QCLot: 3379792)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	104	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	104	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	102	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	103	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	102	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	92.0	63.0	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3374581)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.0	72.0	128
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.0	67.0	130
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3374581)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	98.0	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3374581)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	85.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	78.8	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	93.2	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	104	69.2	143

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3382678)							
ES2040839-001	QC201_20201111	EG005T: Arsenic	7440-38-2	50 mg/kg	88.2	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	103	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	87.2	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	103	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	102	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3382677)							
ES2040839-001	QC201_20201111	EG035T: Mercury	7439-97-6	5 mg/kg	77.3	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 3375818)							
ES2041120-021	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	74.8	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	76.6	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	80.8	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	82.2	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	96.0	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	80.5	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3375818)							
ES2041120-021	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	85.6	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	75.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	90.2	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	76.2	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	88.6	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3379791)							
ES2041243-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	98.6	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	88.5	70.0	130
EP074F: Halogenated Aromatic Compounds (QCLot: 3379791)							
ES2041243-001	Anonymous	EP074: Chlorobenzene	108-90-7	2.5 mg/kg	90.8	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3375816)							
ES2041120-021	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	91.6	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	97.2	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	77.8	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	84.7	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	56.7	20.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3375816)							
ES2041120-021	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	91.0	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	81.5	70.0	130
EP075A: Phenolic Compounds (QCLot: 3375817)							
ES2041120-021	Anonymous	EP075: Phenol	108-95-2	10 mg/kg	110	60.0	130
		EP075: 2-Chlorophenol	95-57-8	10 mg/kg	98.4	60.0	130
		EP075: 2-Nitrophenol	88-75-5	10 mg/kg	91.4	50.0	130
		EP075: 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	97.5	50.0	130
		EP075: Pentachlorophenol	87-86-5	10 mg/kg	32.9	10.0	130
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 3375817)							
ES2041120-021	Anonymous	EP075: Acenaphthene	83-32-9	10 mg/kg	95.6	50.0	130
		EP075: Pyrene	129-00-0	10 mg/kg	84.4	50.0	130
EP075D: Nitrosamines (QCLot: 3375817)							
ES2041120-021	Anonymous	EP075: N-Nitrosodi-n-propylamine	621-64-7	10 mg/kg	113	50.0	130
EP075E: Nitroaromatics and Ketones (QCLot: 3375817)							
ES2041120-021	Anonymous	EP075: 2.4-Dinitrotoluene	121-14-2	10 mg/kg	86.0	40.0	130
EP075G: Chlorinated Hydrocarbons (QCLot: 3375817)							
ES2041120-021	Anonymous	EP075: 1.4-Dichlorobenzene	106-46-7	10 mg/kg	95.8	60.0	130
		EP075: 1.2.4-Trichlorobenzene	120-82-1	10 mg/kg	90.3	50.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3375815)							
ES2041120-021	Anonymous	EP071: C10 - C14 Fraction	----	523 mg/kg	111	73.0	137
		EP071: C15 - C28 Fraction	----	2319 mg/kg	108	53.0	131
		EP071: C29 - C36 Fraction	----	1714 mg/kg	117	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3379792)							
ES2041243-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	108	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3375815)							
ES2041120-021	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	96.9	73.0	137
		EP071: >C16 - C34 Fraction	----	3223 mg/kg	116	53.0	131
		EP071: >C34 - C40 Fraction	----	1058 mg/kg	105	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3379792)							
ES2041243-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	115	70.0	130
EP080: BTEXN (QCLot: 3379792)							
ES2041243-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	98.7	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	85.4	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	103	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	87.1	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 3379792) - continued							
ES2041243-001	Anonymous	EP080: ortho-Xylene	95-47-6	2.5 mg/kg	81.7	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	107	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3374581)							
EP2012671-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	83.2	72.0	128
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	85.2	67.0	130
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	107	68.0	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3374581)							
EP2012671-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	100	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	104	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	95.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	105	69.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3374581)							
EP2012671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	92.0	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	87.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	106	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	120	69.2	143

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2040839**	Page	: 1 of 9
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: Mr Ian Batterley	Telephone	: +61 2 8784 8555
Project	: 0564417 Kamay Wharf Project, La Perouse	Date Samples Received	: 18-Nov-2020
Site	: ----	Issue Date	: 27-Nov-2020
Sampler	: ----	No. of samples received	: 1
Order number	: ----	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **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 : 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
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074B: Oxygenated Compounds						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074C: Sulfonated Compounds						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074D: Fumigants						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074E: Halogenated Aliphatic Compounds						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074F: Halogenated Aromatic Compounds						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**
EP074G: Trihalomethanes						
Soil Glass Jar - Unpreserved						
QC201_20201111	24-Nov-2020	18-Nov-2020	**6**	24-Nov-2020	18-Nov-2020	**6**

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA029-A: pH Measurements							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA029-B: Acidity Trail							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-C: Sulfur Trail							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-D: Calcium Values							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-E: Magnesium Values							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-F: Excess Acid Neutralising Capacity							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-G: Retained Acidity							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA029-H: Acid Base Accounting							
Snap Lock Bag - frozen (EA029)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	07-Aug-2023	✓	**25-Nov-2020**	23-Feb-2021	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
QC201_20201111	**11-Nov-2020**	**----**	----	----	**25-Nov-2020**	25-Nov-2020	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	10-May-2021	✓	**26-Nov-2020**	10-May-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
QC201_20201111	**11-Nov-2020**	**25-Nov-2020**	09-Dec-2020	✓	**26-Nov-2020**	09-Dec-2020	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**24-Nov-2020**	31-Dec-2020	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**24-Nov-2020**	31-Dec-2020	✓
EP074A: Monocyclic Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×

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
EP074B: Oxygenated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP074C: Sulfonated Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP074D: Fumigants							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP074F: Halogenated Aromatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP074G: Trihalomethanes							
Soil Glass Jar - Unpreserved (EP074)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	18-Nov-2020	×	**24-Nov-2020**	18-Nov-2020	×
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**22-Nov-2020**	31-Dec-2020	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**22-Nov-2020**	31-Dec-2020	✓
EP075A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075C: Phthalate Esters							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075D: Nitrosamines							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075E: Nitroaromatics and Ketones							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓

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
EP075F: Haloethers							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075G: Chlorinated Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075H: Anilines and Benzidines							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075I: Organochlorine Pesticides							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP075J: Organophosphorus Pesticides							
Soil Glass Jar - Unpreserved (EP075)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
Soil Glass Jar - Unpreserved (EP080)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	25-Nov-2020	✓	**24-Nov-2020**	25-Nov-2020	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP071)							
QC201_20201111	**11-Nov-2020**	**21-Nov-2020**	25-Nov-2020	✓	**21-Nov-2020**	31-Dec-2020	✓
Soil Glass Jar - Unpreserved (EP080)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	25-Nov-2020	✓	**24-Nov-2020**	25-Nov-2020	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
QC201_20201111	**11-Nov-2020**	**24-Nov-2020**	25-Nov-2020	✓	**24-Nov-2020**	25-Nov-2020	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201111	**11-Nov-2020**	**20-Nov-2020**	10-May-2021	✓	**23-Nov-2020**	30-Dec-2020	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201111	**11-Nov-2020**	**20-Nov-2020**	10-May-2021	✓	**23-Nov-2020**	30-Dec-2020	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
QC201_20201111	**11-Nov-2020**	**20-Nov-2020**	10-May-2021	✓	**23-Nov-2020**	30-Dec-2020	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
QC201_20201111	**11-Nov-2020**	**20-Nov-2020**	10-May-2021	✓	**23-Nov-2020**	30-Dec-2020	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Semivolatile Organic Compounds	EP075	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Suspension Peroxide Oxidation-Combined Acidity and Sulphate	EA029	SOIL	In house: Referenced to Ahern et al 2004 - a suspension peroxide oxidation method following the 'sulfur trail' by determining the level of 1M KCL extractable sulfur and the sulfur level after oxidation of soil sulphides. The 'acidity trail' is followed by measurement of TAA, TPA and TSA. Liming Rate is based on results for samples as submitted and incorporates a minimum safety factor of 1.5.
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 AS 3550, 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)
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Semivolatile Organic Compounds	EP075	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by LC-Electrospray-MS-MS, Negative Mode using MRM using internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures and data quality objectives conform to US DoD QSM 5.3, table B-15 requirements.

Preparation Methods	Method	Matrix	Method Descriptions
Drying at 85 degrees, bagging and labelling (ASS)	EN020PR	SOIL	In house
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Sample Extraction for PFAS in solid matrices	ORG73	SOIL	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to a portion of soil which is then extracted with MTBE and an ion pairing reagent. A portion of extract is exchanged into the analytical solvent mixture, combined with an equal volume reagent water and filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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Eurofins | mgt Melbourne Lab — 2 Kingston Town Close, Oakleigh, VIC 3166 — P: +61 3 8564 5000 — F: +61 3 8564 5090 — E: EnviroSampleVic@eurofins.com.au

Company	ERM	Purchase Order	
Address	Unit 11. 277 Lane Cove Road, Macquarie Park, 2113	Eurofins | mgt Quote №	
Contact Name	Tristan Rodrigues		
Contact Phone №	0417 187 687		
Special Direction			
Relinquished by	Tristan Rodrigues		
(Signature)	TR		
(Time / Date)	11.11.2020		

Project Manager	Ian Batterley	Project Name	Kamay Wharf Project, La Perouse
Project №	0564417	Electronic Results Format	ESDAT
		Email for Results	ian.batterley@erm.com, tristan.rodrigues@erm.com

Turn Around Requirements: ☐ 1 DAY* ☐ 2 DAY* ☐ 3 DAY* (* Surcharges apply) ☑ 5 DAY (Std.) ☐ Other ( )

Analysis (Note: Where metals are requested, please specify "Total" or "Filtered".) — HOLD

Subcon / Forward Lab / Split WO

Lab / Analysis: Brisbane / SGCAS

Organised By / Date:

Relinquished By / Date:

Connote / Courier:

WO No:

Attached By PO / Internal Sheet:

Containers: 1L Plastic | 250mL Plastic | 125mL Plastic | 200mL Amber Glass | 40mL vial | 125mL Amber Glass Jar | # containers

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

№	Client Sample ID	Date	Matrix		# containers	Sample Comments / DG Hazard Warning
1	LP-TP01_0.1	11/11/20	Soil	X	3	1X Glass Jar, 1X Asb bag, 1x PFAS Jar
2	LP-TP01_0.5	11/11/20	Soil	X	4	1X Glass Jar, 1X Asb bag, 1x PFAS Jar, 1X ASS bag
3	QC101_20201111	11/11/20	Soil	X	4	1X Glass Jar, 1X Asb bag, 1x PFAS Jar, 1X ASS bag
4	(1) QC201_20201111	11/11/20	Soil		4	Please Send to ALS
5	LP-TP01_1.1	11/11/20	Soil	X	4	1X Glass Jar, 1X Asb bag, 1x PFAS Jar, 1X ASS bag
6	LP-TP02_0.1	11/11/20	Soil	X	3	1X Glass Jar, 1X Asb bag, 1x PFAS Jar
7	LP-TP02_0.4	11/11/20	Soil	X	3	1X Glass Jar, 1X Asb bag, 1x PFAS Jar
8	LP-TP02_0.7	11/11/20	Soil	X	2	1X Glass Jar, 1X ASS bag
9	LP-TP02_1.0	11/11/20	Soil	X	4	1X Glass Jar, 1X Asb bag, 1x PFAS Jar, 1X ASS bag
10	LP-TP03_0.2	11/11/20	Soil	X	3	1X Glass Jar, 1X Asb bag, 1x PFAS Jar
11	LP-TP03_0.5	11/11/20	Soil	X	3	1X Glass Jar, 1X Asb bag, 1x PFAS Jar
12	LP-TP03_0.7	11/11/20	Soil	X	4	1X Glass Jar, 1X Asb bag, 1x PFAS Jar, 1X ASS bag

Environmental Division Sydney
Work Order Reference
ES2040839

Telephone : + 61-2-8784 8555

Laboratory Use Only

Received By	Sep M.	SYD / BNE / MEL / PER / ADL / NEW / DAR	Date 18/11/2020	Time 13:15	Signature
Received By		SYD / BNE / MEL / PER / ADL / NEW / DAR	Date __/__/__	Time __:__	Signature

Temperature

Report №

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Rec-SOffice 18/11/20 1500 4.3 < 4.8°C

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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☐ Eurofins | mgt Melbourne Lab — 2 Kingston Town Close, Oakleigh, VIC 3166 P: +61 3 8564 5000 F: +61 3 8564 5090 E: EnviroSampleVic@eurofins.com.au

Company	ERM	Purchase Order	
Address	Unit 11. 277 Lane Cove Road, Macquarie Park, 2113	Eurofins | mgt Quote №	
Contact Name	Tristan Rodrigues	Project Manager	Ian Batterley
Contact Phone №	0417 187 687	Project №	0564417
Special Direction		Project Name	Kamay Wharf Project, La Perouse
Relinquished by	Tristan Rodrigues	Electronic Results Format	ESDAT
(Signature)	TR	Email for Results	ian.batterley@erm.com, tristan.rodrigues@erm.com
(Time / Date)	11.11.2020	Turn Around Requirements	☐ 1 DAY* ☐ 2 DAY* ☐ 3 DAY* * Surcharges apply ☑ 5 DAY (Std.) ☐ Other ( )

Analysis (Note: Where metals are requested, please specify "Total" or "Filtered")

HOLD

Containers

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

№	Client Sample ID	Date	Matrix	HOLD	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL Vial	125mL Amber Glass Jar	# containers	Sample Comments / DG Hazard Warning
1	QC301_20201111	11/11/20	water	X					2			
2	QC401_20201111	11/11/20	water	X					2			
3	QC501_20201111	11/11/20	water	X							5	
4												
5												
6												
7												
8												
9												
10												
11												
12												

Laboratory Use Only

Received By ___ SYD | BNE | MEL | PER | ADL | NEW | DAR Date ___/___/___ Time ___:___ Signature ___ Temperature ___

Received By ___ SYD | BNE | MEL | PER | ADL | NEW | DAR Date ___/___/___ Time ___:___ Signature ___ Report № ___

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Company	ERM	Purchase Order		Project Manager	Ian Batterley
Address	Unit 11. 277 Lane Cove Road, Macquarie Park, 2113	Eurofins | mgt Quote №		Project №	0564417
Contact Name	Tristan Rodrigues				
Contact Phone №	0417 187 687				
Special Direction					
Relinquished by	Tristan Rodrigues				
(Signature)	TR				
(Time / Date)	5.11.2020				

Project Name	Kamay Wharf Project
Electronic Results Format	ESDAT
Email for Results	ian.batterley@erm.com, tristan.rodrigues@erm.com
Turn Around Requirements	☐ 1 DAY* ☐ 2 DAY* ☐ 3 DAY* *Surcharges apply ☐ 5 DAY (Std.) ☐ Other ( )

Containers

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

№	Client Sample ID	Date	Matrix	HOLD	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL vial	125mL Amber Glass	Jar	# containers	Sample Comments / DG Hazard Warning
1	TP10_0.1	4/11/20	Soil	X								3	
2	TP10_1.0	4/11/20	Soil	X								4	
3	TP14_0.2	4/11/20	Soil	X								4	
4	TP14_0.7	4/11/20	Soil	X								4	
5	QC101_20201104	4/11/20	Soil	X								4	
6	(1) QC201_20201104	4/11/20	Soil									4	Please send to ALS
7	BH01_0.1	4/11/20	Soil	X								4	
8	BH01_0.4	4/11/20	Soil	X								4	
9	BH01_0.8	4/11/20	Soil	X								4	
10	BH01_1.1	4/11/20	Soil	X								4	
11	QC301_20201104	4/11/20	Water	X								2	
12	QC401_20201104	4/11/20	Water	X								2	

Laboratory Use Only									
	Received By		SYD | BNE | MEL | PER | ADL | NEW | DAR	Date	__/__/__	Time	__:__	Signature	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NEW | DAR	Date	__/__/__	Time	__:__	Signature	Report №

QS3009_R4 Modified by: S. Kojima Approved by: T. Lakeland Approved on: 11 August 2015

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Rec - Soffie 18/11/20 1500 4.3c

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☐ Eurofins | mgt Melbourne Lab — 2 Kingston Town Close, Oakleigh VIC 3166 P: +61 3 8564 5000 F: +61 3 8564 5090 E: EnviroSampleVic@eurofins.com.au

Company	ERM	Purchase Order		Project Manager	Ian Batterley
Address	Unit 11. 277 Lane Cove Road, Macquarie Park, 2113	Eurofins | mgt Quote №		Project №	0564417
Contact Name	Tristan Rodrigues				
Contact Phone №	0417 187 687				
Special Direction					
Relinquished by	Tristan Rodrigues				
(Signature)	TR				
(Time / Date)	5.11.2020				

Project Name	Kamay Wharf Project
Electronic Results Format	ESDAT
Email for Results	ian.batterley@erm.com, tristan.rodrigues@erm.com
Turn Around Requirements	☐ 1 DAY* ☐ 2 DAY* ☐ 3 DAY* ☐ 5 DAY (Std.) ☐ Other ( ) * Surcharges apply

Analysis (Note: Where metals are requested, please specify "Total" or "Filtered".)

№	Client Sample ID	Date	Matrix	HOLD	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL Vial	125mL Amber Glass	Jar	# containers	Sample Comments / DG Hazard Warning
1	QC501_20201104	4/11/20	Soil	X								5	
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													

Containers

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

Laboratory Use Only								
Received By		SYD | BNE | MEL | PER | ADL | NEW | DAR	Date	___/___/___	Time	___:___	Signature	Temperature
Received By		SYD | BNE | MEL | PER | ADL | NEW | DAR	Date	___/___/___	Time	___:___	Signature	Report №

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Rec - Soffin 18/11/2015 09:48

#AU04_Enviro_Sample_NSW

To: Tristan Rodrigues; Alena Bounkeua
Cc: Ian Batterley
Subject: RE: 0564417- COC La Perouse

From: Tristan Rodrigues <Tristan.Rodrigues@erm.com>
Sent: Monday, 16 November 2020 2:47 PM
To: Alena Bounkeua <AlenaBounkeua@eurofins.com>
Cc: #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>; Ian Batterley <Ian.Batterley@erm.com>
Subject: 0564417- COC La Perouse

Hi Alena,

Could we please have the following samples analysed on Standard Turnaround times from COC 756487 and attached COCs for samples delivered last week

Sample ID	Date	Analysis recommended
LP-TP01-0.1	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP01_0.5	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
QC101_20201111	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
QC201_20201111 (Send to ALS)	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS — SPOCAS as previously confirmed with Ian
QC301_20201111	11/11/2020	TRH, BTEX
QC301_20201112 No21452	12/11/2020	TRH, BTEX
QC401_20201111	11/11/2020	BTEX
QC401_20201112 No21451	12/11/2020	BTEX
QC501_20201111	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
QC501_20201112 No21450	12/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP01_1.1	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
LP-TP02_0.1	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP02_0.4	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP02_0.7	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, ASS
LP-TP02_1.0	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS
LP-TP03_0.2	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP03_0.5	11/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP03_0.7	11/11/2020	TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS, ASS

LP-TP04-0.2 No21442	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP05-0.2 No21443	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
QC101_20201112 No21444	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP05-0.4 No21445	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP06-0.2 No21448	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP06-0.25 No21449	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP07-0.1 No21446	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP07-0.2 No21447	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-TP10- 0.1 No21439	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS
LP-BH01-0. 1 No21438	12/11/2020	Asbestos ID , TRH, BTEX, SVOCs, VOCs, heavy metals, PAHs, phenols, OCP/OPP, PFAS

Kind Regards,

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