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8 May 2023

Reference: 0607031

Dear Athlene

Subject: ERM (2021) Due Diligence Contamination Assessments 263-273 and 273A Coward Street and 76-82 Kent Road, Mascot, NSW

1. INTRODUCTION

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Qantas Airways Limited (Qantas) to undertake a Due Diligence Contamination Assessment of the Qantas owned land identified as 263-273 and 273A Coward Street and 76-82 Kent Road (comprising new Lots 100 and 101 DP 1277278 and existing Lot 5 DP 1194564 and Lot 3 DP 230355).

- ERM notes that the Site was previously identified within previous investigations (summarised in Section 3.0) as Lot A – Coward Street and Kent Road, Mascot, NSW.).

This assessment was undertaken to supplement data collected as part of previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken at the Site.

The objective of this letter is to review the Due Diligence Contamination Assessment, Lot A – Coward Street and Kent Road, Mascot, NSW, 3rd August 2021 Ref No 0607031 prepared for the site on behalf of Qantas and to assess whether it remains applicable for the site, and therefore suitable for submission as part of the proposed Planning Proposal as per the recent council planning application requirements (Ref: SF22/4893).

- ERM notes that based on information provided to ERM at the time of this letter report, indicates that land uses undertaken within the Site area are consistent with those undertaken at the time of the ERM (2021) Due Diligence Report.

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1.1 Background

Perpetual Corporate Trust Limited as the trustee of the LMLP 1 and 2 Trust acquired the site in 2021. It is understood they are now seeking to amend the Bayside Local Environmental Plan 2021 to increase the maximum floor space ratio (FSR) of the site from 1.2:1 to 2:1 and introduce site specific additional permitted uses (as shown in the planning proposal attached in **Appendix B**) under Schedule 1.

The amendments to the FSR would enable the redevelopment of the site to deliver critically needed industrial floor space close to Sydney Airport, Port Botany and the Sydney Central Business District (CBD).

It is proposed to redevelop the site in stages to accommodate continuation of the existing operations in the Qantas Sydney Distribution Centre (SDC) in accordance with the leaseback arrangements.

Bayside Council prepared preliminary advice in response to the Scoping Proposal – for the Potential Draft Planning Proposal at 263-273 and 273A Coward Street and 76-82 Kent Road, Mascot (Ref: SF22/4893).

It was noted that to enable Council to carry out a proper assessment of the proposal, several supporting technical documents are required. One of these documents is a Detailed Site Investigation (DSI).

2. SITE IDENTIFICATION

Site identification information is presented within the table below

Table 2.1 Site Identification

Item	Description
Site	■ 263-273 and 273A Coward Street and 76-82 Kent Road
Site Owner	■ Perpetual Corporate Trust Limited as the trustee of the LMLP 1 and 2 Trust
Current Site Occupiers	■ Qantas
Lot and DP	■ Lots 100 and 101 DP 1277278, Lot 5 DP 1194564 and Lot 3 DP 230355 ■ ERM notes that the Lot and DP nomenclature have been amended since completion of the ERM (2021) Assessment, however the site boundary remains consistent with the boundary in place during the ERM (2021) investigation. .
Local Government Area	■ Bayside Council
Zoning	■ E4 General Industrial (*Bayside Local Environmental Plan 2021*)
Geographical Co-Ordinates	■ 33°92'44.45"S 151° 18'03.94"E (approximate centre of site)
Site Area and Dimensions	■ 94,565.6 m2
Site Location and Site Layout Subject of the ERM (2021) Assessment	■ Figure 1 and Figure 2 Appendix A

2.1 Regulatory Requirements

The investigation was performed in accordance with the relevant elements of the following guidelines and standards.

- AS 4482.2 - Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances, Australian Standard (1999);
- AS 4482.1 - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 2: Non-volatile and Semi-volatile compounds, Australian Standard (2005);
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Guidelines for Assessing and Managing Water Quality in Temporary Waters, Smith, REW, Boulton, AJ, Baldwin, DS, Humphrey, CL, Butler, B & Halse, (October 2020). This is hereafter referred to as 'the Temporary Water Guidelines';
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment Conservation Council (ANZECC) (2000);
- Australian Drinking Water Guidelines (ADWG), National Health and Medical Research Council (NHMRC) (2011);
- ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia;
- Consultants Reporting on Contaminated Land, Contaminated Sites Guidelines, NSW EPA (2020);
- National Environment Protection (Assessment of Site Contamination) Measure 1999, National Environmental Protection Council (NEPC) (April 2013). This is hereafter referred to as 'the ASC NEPM, 2013';
- Designing Sampling Programs for Sites Potentially Contaminated by PFAS, NSW EPA (2017);
- Guidelines for the NSW Site Auditor Scheme (3rd edition), NSW Environment Protection Authority (EPA), (2017);
- Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), WA Department of Environment Regulation (2017);
- Perfluorinated Chemicals in Food, Food Standards Australia and New Zealand (2017). This is hereafter referred to as 'FSANZ'; and
- PFAS National Environmental Management Plan, Heads of Environment Protection Authority (HEPA) Version 2.0 (January 2020). This is hereafter referred to as 'the NEMP'.

ERM notes that various guidelines have been updated since completion of the works including the NSW EPA (2022) Sampling Design Guidelines. It is the opinion of ERM that as the investigation was undertaken on a targeted basis and to supplement existing data sets, that the investigation is considered to meet the overall requirement of the NSW EPA (2022) Sampling Design Guidelines.

3. ERM (2021) DUE DILIGENCE ASSESSMENT

The following provides a summary of information presented within the ERM (2021) Due Diligence Assessment.

> **ERM notes that this letter report is intended as a summary only and should be read in conjunction with the ERM (2021) Due Diligence Contamination Assessment, Lot A – Coward Street and Kent Road, Mascot, NSW, 3rd August 2021 Ref No 0607031.**

Introduction and Objectives

The ERM (2021) assessment was undertaken to enable collection of environmental data to supplement previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken at the Site.

Information provided within previous investigations indicated that the site has been used for a range of commercial / industrial purposes since the 1940s that has resulted in the presence of asbestos containing materials (ACM), hazardous ground gases, petroleum hydrocarbons and pesticide impacted soil at several locations throughout the northern and central portion of the Site.

The objective of the assessment was to collect environmental data from potentially impacted media (soil, groundwater, surface water, sediment, hardstand and potential methane) to supplement previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken at the Site to aid potential site divestment planning.

Scope of Works

To achieve the objectives outlined above, ERM completed the following scope of works to assess AECs identified within the previously prepared Reditus (2021) Preliminary Site Investigation (PSI):

- project preliminaries including preparation of a site specific Health and Safety Plan (HaSP) and completion of subsurface utility clearance requirements;
- soil investigation works including:
  - completion of a Ground Penetrating Radar (GPR) survey to assess the number and orientation of underground storage tanks (USTs) located within the vicinity of AEC 3 / 4 located within the central portion of the Site;
  - completion of eight test pits to a maximum depth of 2.5 m below ground level (bgl) to assess the potential for and composition of fill material present within the Site;
  - completion of nine shallow soil bores to a maximum depth of 1.9 m bgl to assess the potential for and composition of fill material present within the Site;
  - the collection of two surface soil samples from the area adjacent to a live transformer (AEC-8) located within the central portion of the Site;
  - the collection of five samples of hardstand materials from areas identified to have be utilised for historical fire extinguisher training to ass the potential for residual PFAS to be present;
- groundwater investigation works including:
  - the installation of 15 groundwater monitoring wells to a maximum depth of 5 m bgl;

- undertaking a Groundwater Monitoring Event (GME) including the gauging and sampling of 12 newly installed and nine existing groundwater monitoring wells;

- surface water / sediment works:
  - surface water and sediment sampling for a range of CoPCs including PFAS at seven locations within onsite stormwater drainage lines located within the Site to assess the potential for migration of key CoPCs through surface water drainage lines;
- submission of collected soil, water, sediment and hardstand samples to a laboratory NATA accredited for the required analysis; and
- preparation of a factual investigation report.

Results of Investigation

Based on the results of this investigation, ERM concluded the following:

- Field observations made during site investigation works identified fill material at variable depths throughout the Site including a range of anthropogenic inclusions within test pit / boreholes located with the central and south western portion of the Site. Fill materials were identified to extend from approximately 1.5 m in depth in the northern portion of the Site to the maximum depth of investigation (4.4 m bgl) within the south eastern portion of the Site.
- Results of the GPR survey to assess the number / orientation of USTs within AEC 3 / AEC 4 was inconclusive due to interference from reinforced steel within surface concrete, however based on vent pipes visible on the building structure it is estimated that a total of 7 USTs are present. Analytical results from groundwater samples collected from groundwater wells within the vicinity of the USTs returned concentrations of CoPCs less than the adopted assessment criteria and / or LOR indicating that there is a low risk of significant / widespread contamination within underlying soil / groundwater from onsite USTs.
  - ERM notes that following completion of the ERM (2021) assessment subsequent investigation works undertaken Geosyntec (*Geosyntec 2022 Baseline Assessment and Data Gap Investigation*)
  - In undertaking these works Geosyntec completed further assessment of the potential USTs within the Site within AEC 3 and AEC 4 including tracing of vent lines, and undertaking a scan via GPR over an area of “newer road surface”. On the basis of these results it was concluded by Geosyntec that the USTs had been removed from the Site.
  - One UST within AEC3 was confirmed by Geosyntec to be present within the Site. Geosyntec stated that based on their review of previous results soil an groundwater downgradient of the confirmed UST was less than the adopted assessment criteria and or / LOR.
- Elevated methane has been identified within the northern portion of the Site during previous investigations undertaken by Coffey. Previous investigations undertaken by JK identified elevated methane within the north eastern portion of the Site that may pose a risk to future receptors. Recent investigations undertaken by Reditus identified a low risk of harm from methane within onsite building structures

- Results of the ERM (2021) investigation identified elevated methane within three monitoring wells (MW01, MW107, MW05) located within the northern and north eastern portion of the Site. Elevated methane with a flow rate ranging from 0.5 – 1.0L/hr was observed at MW01 and MW05 that indicates the potential for ground gases to be present that require management with a calculated site CS rating of 2.
- Based on results of previous investigations (JK 2020) and the gas protection guidance value of 2 calculated as part of this investigation, gas protection measures may be required for future potential developments within the north eastern portion of the Site.

- Asbestos was detected in soil at several locations throughout the site during this investigation and previous investigations. Based on the nature and variable distribution of asbestos within the site is likely associated with historical filling of the Site for construction purposes. Due to the distribution of asbestos within the Site, the potential for asbestos within fill within unassessed portions of the site requires consideration. Asbestos was also detected within stockpiled material located within the central portion of the site. Where intrusive works are planned to be undertaken an Environmental Management Plan (EMP) should be prepared that outlines the require management processes to mitigate risks to human health. The stockpile located within the central portion of the Site is currently vegetated, however consideration should be given to covering the stockpile to prevent windblown emissions of dust should vegetation die or the stockpile be eroded during periods of heavy rainfall etc.

- Minor exceedances of EIL for various heavy metals, were identified soils and groundwater located throughout the Site. Based on the commercial / industrial land uses undertaken within the Site, these exceedances of EILS are unlikely to pose a risk of harm due to the lack of ecological receptors within and surrounding the Site. Previous investigations identified concentrations of heavy metals within groundwater are considered likely to be indicative of regional / background concentrations rather than onsite anthropogenic sources of heavy metals.

- Previous investigations undertaken by Reditus identified elevated concentrations OCP/OPP within the central portion of AEC-1.
  - Information presented within Figure 1 of the Reditus waste classification report identified that the distance between BH1, BH2 and BH3 was approximately 10 – 15 m indicating that the identified elevated pesticides were likely to be limited area with a maximum diameter approximately 30m in diameter.
  - Results from these investigation works returned concentrations of CoPCs (included OCP/OPP) less than LOR from location BH208 located approximately 5m north of the previous Reditus location indicting the identified pesticides are localised and unlikely to be widespread
  - ERM notes as outlined within the Reditus PSI, the area was identified to have potentially contained historical chemical storage sheds and as such, based on results collected from current and historical investigations within and surrounding AEC-1, the previously identified elevated OCP/OPP concentrations may be associated with an isolated hotspot and not indicative of significant or widespread contamination.
- ERM notes that at the time of the ERM (2021) investigation, the onsite transformer was live / operational and located on a concrete slab. Due to the presence of live services associated with the transformer intrusive works were not possible within close proximity to

the transformer. As such two surface samples were collected from material surrounding the transformer. As any contamination arising from the transformer is likely to impact surface soils, this approach was considered appropriate for screening purposes. All chemical CoPCs within samples collected from within the vicinity of the transformer were identified to be less than LOR and / or the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.

- Elevated concentrations of PFAS was identified within collected groundwater samples from groundwater monitoring well GW228 located within the south western portion of the Site. An oil / water separator located approximately 30 m to the north east of GW228 was reported within previous investigation to have historically been utilised for the capture / discharge of waste water that may have contained PFAS. Based on the proximity of GW228 to the oil / water separator, the identified south westerly groundwater flow within this portion of the Site and results from surrounding monitoring wells returning concentrations less than adopted health based criteria, the identified PFAS within groundwater at GW228 may be attributable to the former oil / water separator and not indicative of significant or widespread PFAS contamination.

- PFAS was also detected within soil and groundwater within the south eastern portion of the Site. ERM notes that elevated PFAS (20.8 µg/L) was identified within monitoring well GW201. An additional 3 groundwater wells were installed within the vicinity of GW201 which returned concentrations ranging from GW252 (4.2 µg/L), GW253 (3.62 µg/L) and GW254 (0.9 µg/L).

    - Based on the calculated flow direction (south west), concentrations of PFAS within samples collected from additional wells installed within the vicinity of GW201 and the historical land uses undertaken within that portion of the Site (car parking), it is considered likely that the elevated PFAS within GW201 is likely to be a localised hotspot and may not be indicative of a widespread impact.

    - ERM further notes that based on concentrations of PFAS within monitoring wells GW206 and GW219 located to the south west (down gradient) of monitoring well GW201 being less than the adopted screening criteria and / or LOR, ERM considers that the identified elevated PFAS within the south eastern portion of the Site is likely to be localised and unlikely to have resulted in widespread impact to the Site..

- ERM notes that GW228 is located within close proximity to the boundary of the Site and considers there to be a potential for offsite migration of PFAS to have occurred. Consideration should be given to selective / targeted source zone removal of potential PFAS impact associated with the oil / water separator and ongoing monitoring to assess effective removal.

    - Based on the nature of the off-site receiving environment being the NSW EPA regulated Alexandra Canal, the use of the 95% criteria to assess concentrations of CoPCs in groundwater is considered appropriate to assess potential risk to identified offsite receptors.

Results of the ERM (2021) investigation indicated that several source-pathway-receptor linkages may be present within the Site, including potential offsite migration of PFAS, asbestos in soil posing a potential risk during intrusive excavation works and methane within northern portion of the Site resulting in a potential risk to future building occupants. However, due to the commercial industrial nature of the Site and surrounding area, the environmental quality of soil and groundwater at the Site does not preclude the site for continued commercial/industrial land

use (as per the planning proposal attached in **Appendix B**) subject to appropriate management of identified impacts.

4. SCOPING PROPOSAL AND CONCLUSIOONS

As detailed above Bayside Council prepared preliminary advice in response to the Scoping Proposal – for the Potential Draft Planning Proposal at 263-273 and 273A Coward Street and 76-82 Kent Road, Mascot (Ref: SF22/4893).

It was noted that to enable Council to carry out a proper assessment of the proposal, several supporting technical documents are required. One of these documents is a Detailed Site Investigation.

In preparing this letter report, ERM undertook a review of the ERM (2021) Due Diligence Report and considers that the report remain applicable to the Site.

- ERM notes that based on information provided to ERM at the time of this letter report, land uses undertaken within the Site area are consistent with those undertaken at the time of the ERM (2021) Due Diligence Report.

We therefore consider the ERM (2021) Due Diligence Assessment meets the Council requirements to undertake a Detailed Site Investigation of the Site.

Yours sincerely,



Ian Batterley
Partner

5. STATEMENT OF LIMITATION

1. This letter report is based solely on the scope of work as described within this due diligence investigation report dated 3rd August 2021 and performed by ERM Environmental Resources Management Australia Pty Ltd (ERM) for Qantas Airways Limited (the Client). The Scope of Work was governed by a contract between ERM and the Client (Contract).
2. No limitation, qualification or caveat set out below is intended to derogate from the rights and obligations of ERM and the Client under the Contract.
3. The findings of this report are solely based on, and the information provided in this report is strictly limited to that required by, the Scope of Work. Except to the extent stated otherwise, in preparing this report ERM has not considered any question, nor provides any information, beyond that required by the Scope of Work.
4. This report was prepared in August 2021 based in information collected during investigations undertaken in June 2021 and is based on conditions encountered and information reviewed at the time of preparation. The report does not, and cannot, take into account changes in law, factual circumstances, applicable regulatory instruments or any other future matter. ERM does not, and will not, provide any on-going advice on the impact of any future matters unless it has agreed with the Client to amend the Scope of Work or has entered into a new engagement to provide a further report.
5. ERM's Scope of Work was limited strictly to identifying typical environmental conditions associated with the subject site(s) and does not evaluate the condition of any structure on the subject site nor any other issues. Although normal standards of professional practice have been applied, the absence of any identified hazardous or toxic materials or any identified impacted soil or groundwater on the site(s) should not be interpreted as a guarantee that such materials or impacts do not exist.
6. This report is based on one or more site inspections conducted by ERM personnel, the sampling and analyses described in the report, and information provided by the Client or third parties (including regulatory agencies). All conclusions and recommendations made in the report are the professional opinions of the ERM personnel involved. Whilst normal checking of data accuracy was undertaken, except to the extent expressly set out in this report ERM:

   a. did not, nor was able to, make further enquiries to assess the reliability of the information or independently verify information provided by;

   b. assumes no responsibility or liability for errors in data obtained from, the Client, any third parties or external sources (including regulatory agencies).
7. Although the data that has been used in compiling this report is generally based on actual circumstances, if the report refers to hypothetical examples those examples may, or may not, represent actual existing circumstances.
8. Only the environmental conditions and or potential contaminants specifically referred to in this report have been considered. To the extent permitted by law and except as is specifically stated in this report, ERM makes no warranty or representation about:

   a. the suitability of the site(s) for any purpose or the permissibility of any use;

   b. the presence, absence or otherwise of any environmental conditions or contaminants at the site(s) or elsewhere; or

c. the presence, absence or otherwise of asbestos, asbestos containing materials or any hazardous materials on the site(s).

9. Use of the site for any purpose may require planning and other approvals and, in some cases, environmental regulator and accredited site auditor approvals. ERM offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environment works.

10. The ongoing use of the site or use of the site for a different purpose may require the management of or remediation of site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report.

11. This report should be read in full and no excerpts are to be taken as representative of the whole report. To ensure its contextual integrity, the report is not to be copied, distributed or referred to in part only. No responsibility or liability is accepted by ERM for use of any part of this report in any other context.

12. Except to the extent that ERM has agreed otherwise with the Client in the Scope of Work or the Contract, the ERM (2021) Due Diligence Assessment:

    a. has been prepared and is intended only for the exclusive use of the Client;

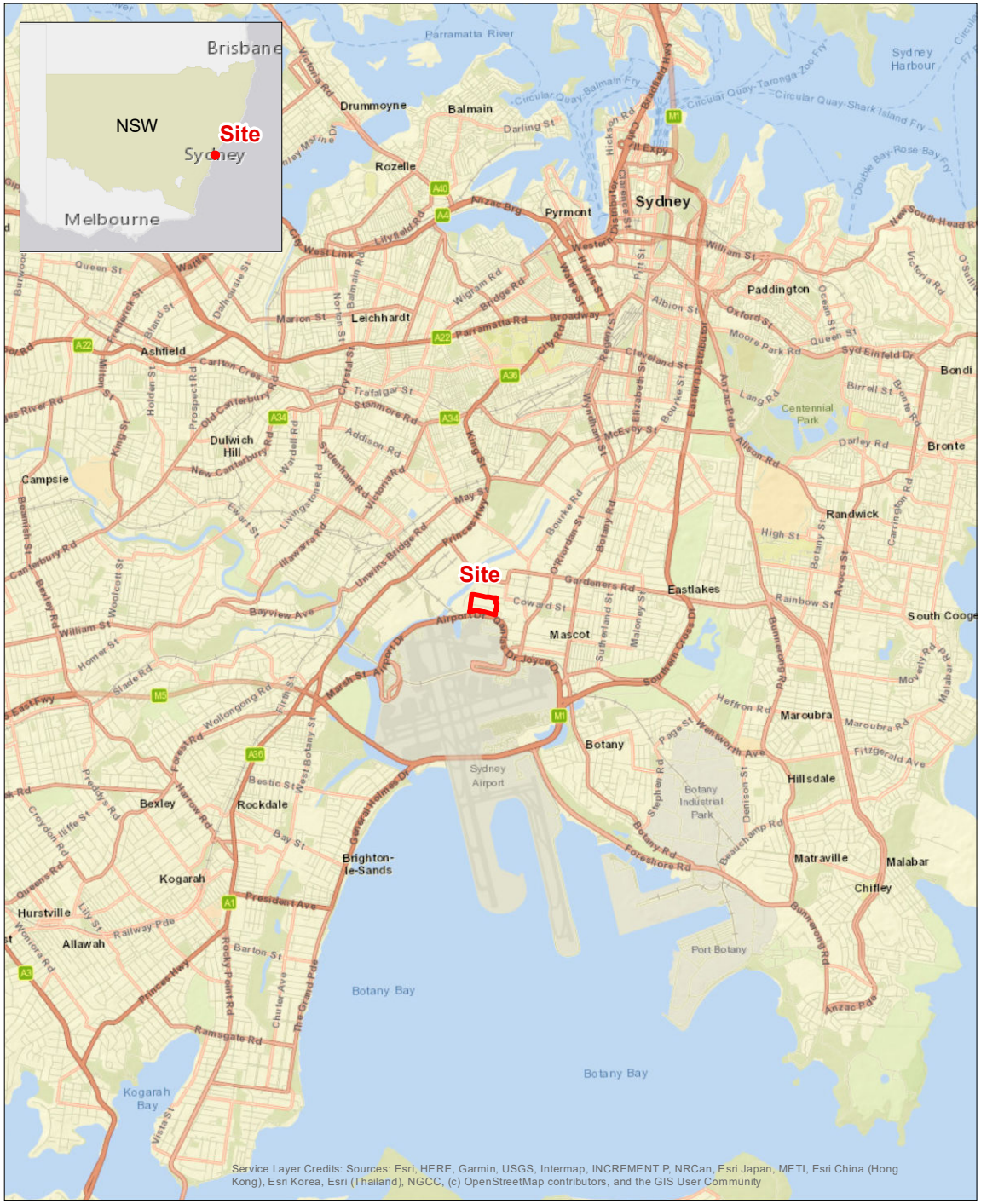
    b. must not to be relied upon or used by any other party;

    c. has not been prepared nor is intended for the purpose of advertising, sales, promoting or endorsing any Client interests including raising investment capital, recommending investment decisions, or other publicity purposes;

    d. does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial commitment or otherwise in or in relation to the site(s); and

    e. does not purport to provide, nor should be construed as, legal advice.

ATTACHMENT A FIGURES





Site Locality

F1

Drawing No:	0607031m_DSI_G001_R0.mxd		**COMMERCIAL IN CONFIDENCE**
Date:	08/07/2021	Drawing Size: A4	**Lot A – Coward Street and Kent Road, Mascot, NSW**
Drawn By:	VN / GR	Reviewed By: DK	Client: COMMERCIAL IN CONFIDENCE

Coordinate System: GDA 1994 MGA Zone 56

0 50 100m

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Site Layout

F 2

Drawing No:	0607031m_DSI_G002_R0.mxd		COMMERCIAL IN CONFIDENCE Lot A – Coward Street and Kent Road, Mascot, NSW
Date:	08/07/2021	Drawing Size: A3	
Drawn By:	GC / GR	Reviewed By: IB	Client: COMMERCIAL IN CONFIDENCE
Coordinate System: GDA 1994 MGA Zone 56 0 10 20 30m		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.

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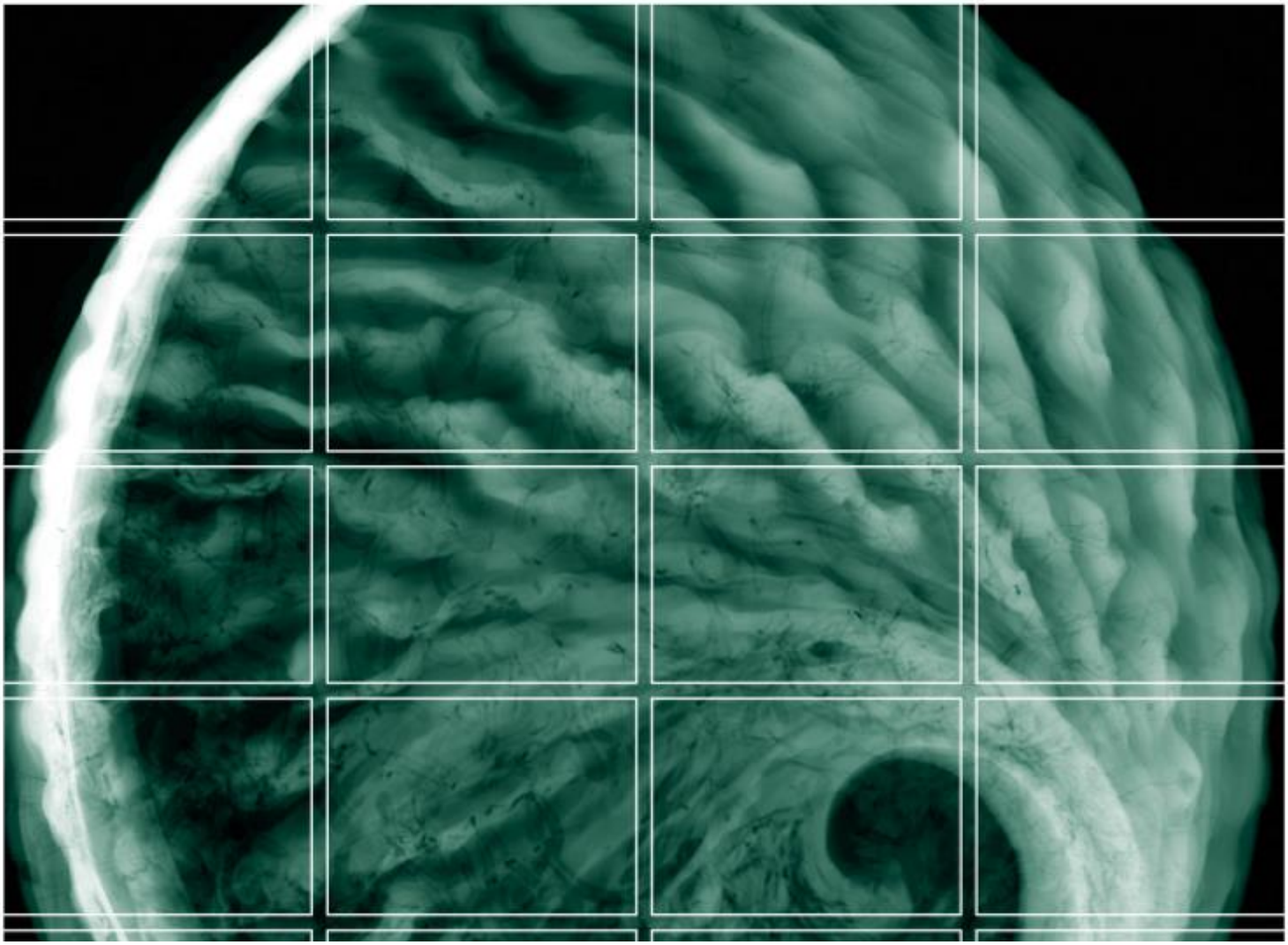
Subject Site

F3

Drawing No:	0607031s_DSI_G003_R0.mxd		COMMERCIAL IN CONFIDENCE Lot A - Coward Street and Kent Road, Mascot, NSW
Date:	28/04/2023	Drawing Size: A3	
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ATTACHMENT B PLANNING PROPOSAL



Due Diligence Contamination Assessment

Lot A – Coward Street and Kent Road, Mascot, NSW

3rd August

Project No.: 067031

The business of sustainability

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Document details	
Document title	Due Diligence Contamination Assessment
Document subtitle	Lot A – Coward Street and Kent Road, Mascot, NSW
Project No.	067031
Date	3rd August
Version	Final_v3.0
Author	Ian Batterley
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Signature Page

3rd August

Due Diligence Contamination Assessment

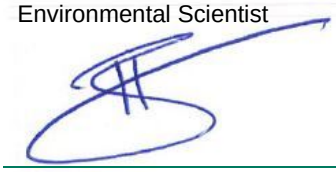
Lot A – Coward Street and Kent Road, Mascot, NSW



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Acronyms and Abbreviations

Name	Description
ACM	Asbestos Containing Material
AHD	Australian Height Datum
ANZECC	Australia and New Zealand Environment and Conservation Council
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure
ASLP	Australian Standard Leaching Procedure
BaP	Benzo(a)Pyrene
CLM Act	Contaminated Land Management Act 1997
COPC	Constituents of Potential Concern
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation of the Environment
CSM	Conceptual Site Model
DCE	dichloroethene
DDT	dichlorodiphenyltrichloroethane
DO	Dissolved Oxygen
DQI	Data Quality Indicator
DQO	Data Quality Objective
EC	Electrical Conductivity
EIL	Ecological Investigation Level
EMP	Environmental Management Plan
ERM	Environmental Resource Management Pty Ltd
eV	Electronvolt
FTS	Fluorotelomer sulfonic acid
HaSP	Health and Safety Plan
HIL	Health Investigation Level
HSL	Health Screening Level
IP	Ionisation potential
IPA	Isopropyl Alcohol
IMW	intrusive maintenance workers
LEL	Lower Explosive Limit
LNAPL	Light Non-Aqueous Phase Liquid
LOR	Limit of reporting
m AHD	metres Australian Height Datum
m bgl	metres below ground level
MGA	Map Grid of Australia
MRL	Minimum Risk Level
mV	millivolt
NATA	National Association of Testing Authorities

Name	Description
NHMRC	National Health and Medical Research Council
NSW	New South Wales
EPA	Environment Protection Authority
OCP	Organochlorine pesticides
ORP	Oxidation-Reduction Potential
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyl
PFAS	Per- and polyfluoroalkyl substances
PFBA	Perfluorobutanoic acid
PFBS	Perfluorobutane sulfonic acid
PFDA	Perfluorodecanoic acid
PFDoDA	Perfluorododecanoic acid
PFHpA	Perfluoroheptanoic acid
PFHpS	Perfluoroheptane sulfonic acid
PFHxS	Perfluorohexane sulfonate
PFNA	Perfluorononanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonate
PFPeA	Perfluoropentanoic acid
PFPeS	Perfluoropentane sulfonic acid
PFHxS	Perfluorohexane sulfonate
PID	Photo-ionisation Detector
PSH	Phase separated hydrocarbons
QA/QC	Quality Assurance and Quality Control
RPD	Relative percentage difference
SAQP	Sampling and Analysis Quality Plan
SPR	Source-Pathway-Receptor
SWL	Standing water level
ERM SSC	ERM Subsurface Clearance
TDS	Total dissolved solids
TEQ	Toxicity Equivalence
TOC	Total organic carbon
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UPSS	Underground Petroleum Storage System
UST	Underground Storage Tank
VOC	Volatile Organic Carbon

1. INTRODUCTION AND OBJECTIVES

1.1 Introduction

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Qantas Airways Limited (Qantas) to undertake a Due Diligence Contamination Assessment of the Qantas owned land identified as Lot A – Coward Street and Kent Road, Mascot, NSW (the Site).

This assessment was undertaken to enable collection of environmental data to supplement previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken at the Site to aid potential site divestment planning.

- The site location is illustrated on **Figure 1** and the current layout is presented on **Figure 2.**

1.2 Background

To assist with potential site divestment planning, Reditus Consulting Pty Ltd (Reditus) completed a Preliminary Site Investigation (PSI) in May 2021 (summarised in Section 4.0) to assess the potential for contamination to be present at the Site.

Information presented within the Reditus (2021) PSI indicated the site has been used for a range of commercial and industrial purposes including market gardens and the manufacturing / testing and maintenance of industrial equipment (aircraft engines, mining equipment, motor vehicles).The Site is currently utilised for a range of purposes including:

- Shipping container and skip bin storage by SUEZ;
- small truck storage by Woolworths;
- Qantas staff car parking and access roads to buildings;
- commercial rooms used for training, presentations and office administration for Qantas;
- Qantas logistics warehousing;
- Qantas workshops used for the maintenance of aircraft jet engines;
- Qantas test cells for propeller aircraft engines and jet engine testing and calibration; and
- Qantas paint spray booths and associated fume cupboards with paints, solvents and other chemical storage areas. Information within the Reditus PSI indicated that only small volumes of products were stored onsite.

The PSI also identified the potential presence of up to seven (7) historical underground storage tanks and one above ground storage tank. A soil stockpile of approximately 500 m^3 is also present near the centre of the Site. ERM notes that at the time of these investigation works, the specific source of the stockpile was unknown however anecdotal evidence indicates it is sourced from onsite spoil materials during civil works associated with construction of buildings or ground improvements including capping of fill materials in the north eastern part of the site.

A review of previous environmental investigations undertaken during the PSI development identified the potential presence of asbestos containing materials (ACM), hazardous ground gases, heavy metals, petroleum hydrocarbons and pesticide impacted soil at several locations throughout the Site.

The PSI identified the following Areas of Concern (AEC) that pose a potential risk of contamination and required further investigation (**Figure 3**).

- AEC1 – Delineation of Previously Identified pesticide Compounds;
- AEC2 – Uncharacterised Fill and historical contaminating activities prior to Qantas occupation;
- AEC3 – Underground Petroleum Storage Systems (UPSS);

- AEC4 – Fire Extinguisher Training Areas;
- AEC5 – Chemical and Waste Storage Areas and Spill Areas;
- AEC6 – Wash Bays;
- AEC7 – Methane Intrusion; and
- AEC8 – Electrical Transformers.

1.3 Project Objectives

The objective of this due diligence project was to collect environmental data from potentially impacted media (soil, groundwater, surface water, sediment, hardstand and potential methane) to supplement previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken at the Site to aid potential site divestment planning

1.4 Scope of Works

To achieve the objectives outlined above, ERM completed the following scope of works to assess AECs identified within the Reditus (2021) PSI:

- project preliminaries including preparation of a site specific Health and Safety Plan (HaSP) and completion of subsurface utility clearance requirements;
- soil investigation works including:
  - completion of a Ground Penetrating Radar (GPR) survey to assess the number and orientation of underground storage tanks (USTs) located within the vicinity of AEC 3 / 4 located within the central portion of the Site;
  - completion of eight test pits to a maximum depth of 2.5 m below ground level (bgl) to assess the potential for and composition of fill material present within the Site;
  - completion of nine shallow soil bores to a maximum depth of 1.9 m bgl to assess the potential for and composition of fill material present within the Site;
  - the collection of two surface soil samples from the area adjacent to a live transformer (AEC-8) located within the central portion of the Site;
  - the collection of five samples of hardstand materials from areas identified to have be utilised for historical fire extinguisher training to ass the potential for residual PFAS to be present;
- groundwater investigation works including:
  - the installation of 15 groundwater monitoring wells to a maximum depth of 5 m bgl;
  - undertaking a Groundwater Monitoring Event (GME) including the gauging and sampling of 12 newly installed and nine existing groundwater monitoring wells;
- surface water / sediment works:
  - surface water and sediment sampling for a range of CoPCs including PFAS at seven locations within onsite stormwater drainage lines located within the Site to assess the potential for migration of key CoPCs through surface water drainage lines;
- submission of collected soil, water, sediment and hardstand samples to a laboratory NATA accredited for the required analysis; and
- preparation of this factual investigation report.

1.5 Regulatory Requirements

The investigation was performed in accordance with the relevant elements of the following guidelines and standards.

- AS 4482.2 - Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances, Australian Standard (1999);
- AS 4482.1 - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 2: Non-volatile and Semi-volatile compounds, Australian Standard (2005);
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality – Guidelines for Assessing and Managing Water Quality in Temporary Waters, Smith, REW, Boulton, AJ, Baldwin, DS, Humphrey, CL, Butler, B & Halse, (October 2020). This is hereafter referred to as 'the Temporary Water Guidelines';
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment Conservation Council (ANZECC) (2000);
- Australian Drinking Water Guidelines (ADWG), National Health and Medical Research Council (NHMRC) (2011);
- ANZG 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality. Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia;
- Consultants Reporting on Contaminated Land, Contaminated Sites Guidelines, NSW EPA (2020);
- National Environment Protection (Assessment of Site Contamination) Measure 1999, National Environmental Protection Council (NEPC) (April 2013). This is hereafter referred to as 'the ASC NEPM, 2013';
- Designing Sampling Programs for Sites Potentially Contaminated by PFAS, NSW EPA (2017);
- Guidelines for the NSW Site Auditor Scheme (3rd edition), NSW Environment Protection Authority (EPA), (2017);
- Interim Guideline on the Assessment and Management of Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), WA Department of Environment Regulation (2017);
- Perfluorinated Chemicals in Food, Food Standards Australia and New Zealand (2017). This is hereafter referred to as 'FSANZ'; and
- PFAS National Environmental Management Plan, Heads of Environment Protection Authority (HEPA) Version 2.0 (January 2020). This is hereafter referred to as 'the NEMP'.

2. SITE BACKGROUND INFORMATION

2.1 Site Identification

Site identification information is presented within the table below

Table 2.1 Site Identification

Item	Description
Site	■ Lot A – Coward Street and Kent Street, Mascot
Site Owner	■ Qantas Airways Limited
Current Site Occupiers	■ Qantas, Suez, Jets Transport and Woolworth Truck Storage. A detailed description of current land uses undertaken within the Site is presented within the Reditus (2021) PSI (summarised within Section 4.0)
Lot and DP	■ Lot 3 DP230355 ■ Lot 4 DP537339 ■ Lot 1 DP738342 ■ Lot 2 DP738342 ■ Lot 5 DP1194564 ■ Lot 23 DP883548 ■ Lot 4 DP3883548 ■ Lot 5 DP38594 ■ Lot 1 DP812210 ■ Lot1 DP445957 ■ Lot 1 DP202093
Local Government Area	■ Bayside Council
Zoning	■ INI – General Industrial (Botany Bay Local Environment Plan 2013)
Geographical Co-Ordinates	■ 33°92'44.45"S 151° 18'03.94"E (approximate centre of site)
Site Area and Dimensions	■ Approximately 9.5 ha
Site Location and Site Layout	■ Figure 1 and Figure 2 **Appendix A**

2.2 Environmental Setting

Information relating to the environmental setting of the Site is presented within the table below

Table 2.2 Environmental Setting

Item	Description
Surrounding Land Use	The land uses surrounding the site include: ■ **North:** Coward Street followed by a range of commercial / industrial properties. ■ **South:** The Sydney Water stormwater canal, then a railway corridor, Qantas Drive and the Qantas Jet Base / Sydney Airport; ■ **West:** Commercial / industrial facilities comprising Toll Express, Nippon Express, DHL distribution centre followed by Alexandra Canal; and ■ **East:** Commercial / industrial properties comprising a steel fabrication and welding facility, post / mail couriers, then Kent Road followed by additional commercial / industrial properties.
Site Elevation	■ The elevation of the Site ranges from approximately 2 – 4 m AHD.
Topography	■ The Site was observed to be predominantly flat with little to no gradient.

Item	Description
Hydrology	During the site inspection no surface waters were observed within the site boundary. During periods of rainfall, onsite water is likely to be directed to onsite and offsite stormwater drainage infrastructure, The nearest surface water body is the Sydney Water Canal located immediately adjacent to the South of the Site. ERM notes that the canal bisects a small portion of the Site in the South Western corner (Figure 2). The Alexandra Canal is located approximately 250 m to the west of the Site. The portion of the Alexandra Canal located between Huntley Street, Alexandria to the junction of Alexandra Canal with the Cooks River at Mascot, being Lot 1 DP 532493, Lot 1 DP749404 and Lot 3 DP878489 is regulated by the NSW Environment Protection Authority (EPA) due to chlorinated hydrocarbons, organochlorine pesticides (chlordane, total DDT and dieldrin), polychlorinated biphenyls (PCBs) and heavy metals that have been identified to present a significant risk of harm to human health and the environment. Water from the Sydney Water Canal discharges into the Alexandra Canal.
Geology and Acid Sulfate Soils	Based on the Sydney 1:100,000 Geological Series Sheet (Herbert, 1983), the Site is underlain by peat, sandy peat and mud. To the east of the Site is medium to fine-grained marine sand with podsols and to the south of the site is man-made fill, dredged estuarine sand and mud, demolition rubble, industrial and household waste. According to the Atlas of Australian Soils (Northcote et al, 1960-68), the Site's natural soils are comprised of coastal sand plains and dunes, lagoons, and swampy areas, with the primary soils being leached sands associated with dunes of siliceous sands and/or calcareous sands fringing the coastline; and swampy areas of soils and soils with peaty surfaces. Bore logs from previous investigations undertaken within the Site indicate that underlying soil conditions encountered during intrusive works were generally consistent with mapped geology / soil conditions. The Site is not identified on the NSW EPA Acid Sulfate Soils (ASS) Risk Map as being a high risk area and assessment for ASS has not been undertaken as part of this investigation.
Hydrogeology	The Site is located within the Botany Groundwater Management Zone 2 with all domestic use of groundwater banned and industrial users required to undertake annual assessment of water and provide results to the NSW Office of Water to confirm the suitability of water for use. Previous intrusive investigations undertaken by Coffey at the adjacent site to the west completed indicated that groundwater was encountered within the natural sands at depths between 1.63 m and 3.23 m BGL. Groundwater flow direction at this site was assessed to be towards the north west in the eastern portion of the site and towards the south west in the western portion of the site. Groundwater gauging undertaken as part of this investigation indicated that groundwater is generally flowing in a south westerly direction (**Figure 7d**).

2.3 Site History and Background Information

A detailed description of site history and background information is presented within Section 3.0 of the Reditus (2021) PSI. A brief summary of the Reditus (2021) PSI including site history / background information is presented within Section 4.0 below.

3. PREVIOUS INVESTIGATIONS

ERM undertook this assessment in consideration of information presented within the following previous reports:

- Coffey Geosciences Pty Ltd (Coffey) Phase 2 Contamination Assessment Proposed Qantas Stores, Coward Street, Mascot, 8th November 2002 Ref No. S21288/1-BK (Coffey 2002);
- Coffey Geosciences Pty Ltd (Coffey) Remedial Action Plan Proposed Qantas Stores, Coward Street, Mascot, 19th November 2002 Ref No. S21288/1-BQ (Coffey 2002a);
- HLA Site Audit Report, Qantas Stores Site 263 – 273 Coward Street, Mascot, NSW, 5th June 2006 Ref No N4028801_SAR (HLA 2006);
- Environmental Resources Management Pty Ltd (ERM) Combined Preliminary Site Investigation and Detailed Site Investigation, 263 Coward Street, 7th February 2019 Ref No 0479522 (ERM 2019);
- Reditus Consulting Pty Ltd (Reditus) Methane Monitoring and Capping Inspection, QSDC, 263 – 271 Coward Street, Mascot, NSW 18th October 2019 ref No. 19146RP01 (Reditus 2019);
- Reditus Consulting Pty Ltd (Reditus) Data Gap Assessment, Proposed Dinata Site, Coward Street, Mascot, NSW 20th January 2020 Ref No 19147RP01; (Reditus 2020);
- JK Environments Pty Ltd Additional Intrusive Investigation for Proposed Catering Facility, 263 Coward Street, Mascot NSW 18th February 2020 Ref No E2844Prpt (JK 2020);
- Reditus Consulting Pty Ltd (Reditus) In-Situ Waste Classification and Soil Assessment – Proposed Services Trench, Sydney Airport, Mascot, NSW, 26th September 2020 (Reditus 2020a);
- Liberty Industrial Pty Ltd Decommissioning Status and Fuel Services Investigation Report, Qantas Fuel Farm Mascot, 20th November 2020 Ref No Qantas Fuel Farm Rev D.(Liberty 2020);
- Reditus Pty Ltd (Reditus) Preliminary Site Investigation, Project Unicorn – Lot A – Coward Street and Kent Road, Mascot, NSW 3rd August 2021 Version 5 Ref No 21140 (Reditus 2021); and
- Reditus Consulting Pty Ltd (Reditus) Methane Monitoring and Capping Inspection, QSDC, 263 – 271 Coward Street, Mascot, NSW 12th February 2021 Ref No. 19146RP02 (Reditus 2021a).

A summary of these previous investigations is provided within **Table 3.1**.

Table 3.1 Summary of Previous Investigation

Report ID	Summary of Investigation Works
Coffey 2002	Coffey undertook a Phase 2 Contamination assessment within the northern portion of the Site identified as Lots 1 and 2 DP738342, Part Lot 4 DP537339, Part Lot 23 DP883548 and Part Lot 1 DP445957 (referred to in this report as the Warehouse Site). Coffey completed the following scope of works: ■ Drilling of 3 bores holes for environmental and geotechnical logging; ■ soil sampling from 18 soil bores and 14 test pits; ■ collection of three grab samples from stockpiled spoil material ■ collection of three sediment samples from the base of a drainage channel; ■ methane monitoring in seven boreholes, fifteen soil bores and 1 dedicated gas monitoring well; and ■ completion of a GPR survey to asses potential buried drums and USTs. Results of the investigation identified: ■ elevated TPH C10-C36 within 9 collected soil samples ■ asbestos was detected within four of the fifteen analysed samples ■ heavy metals (arsenic, copper, lead and zinc) exceeding the adopted assessment criteria were detected within groundwater ■ TPH C6-C36 was detected within MW13, MW14 and MW15 exceeding the adopted groundwater assessment criteria; ■ ammonia was detected within all fifteen groundwater wells at concentrations exceeding the adopted groundwater assessment criteria; ■ heavy metals (arsenic, copper, lead, mercury and zinc) exceeding the adopted assessment criteria were detected within collected sediments; ■ OCPs were identified in one sediment sample exceeding the adopted assessment criteria; and ■ Results of the GPR survey identified a buried waste sump oil drum containing liquid waste which was subsequently reported to contain unknown materials with concentrations of BTEX, PAHs and tetrachloroethene. Coffey noted that previous investigation undertaken by Golder (2001) identified LNAPL in a groundwater well located outside of the Sydney Distribution Centre (SDC), within the northern boundary of the Site. ERM notes that at the time of this investigation, a copy of the Golder report had not been provided for review. Coffey concluded that the SDC Site would be suitable for the proposed development subject to the implementation an EMP that included additional methane sampling (and associated site management), capping of fill materials to limit contact by future site users and finalisation of the geophysical investigation works.
Coffey 2002a	Coffey was engaged by Maunsell Australia to develop a Remedial Action Plan (RAP) to outline remediation / validation requirements to enable the SDC to be suitable for the proposed commercial / industrial development. In developing the RAP, Coffey assessed a number of potential remedial options for contamination identified within the Phase 2 investigation including excavation and offsite disposal, onsite treatment bio-remediation, chemical oxidation, thermal desorption, stabilisation etc.) and management of onsite risks to prevent direct contact. Based on the nature of identified contamination and proposed land uses, Coffey recommended a remediation approach including: ■ Additional GPR surveys and subsequent excavation / disposal of buried drums and associated wastes

Report ID	Summary of Investigation Works
	■ Onsite management of methane through completion of methane validation works (sampling of 40 wells) and where necessary development of methane mitigation requirements (sub slab membranes etc.); and ■ Capping of the surface of the SDC Site to prevent direct contact of soils beneath the site. Coffey noted that upon completion of remedial works, a Long Term Environmental Management Plan (LTEMP) would be required to ensure the cap and other environmental controls were maintained. ■ At the time of this report ERM had not been provided a copy of the LTEMP.
HLA 2006	The Site Auditor (Mr Ross McFarland) provided a Site Audit Statement and Site Audit Report (SAS / SAR) stating that following the assessment, remediation and validation works undertaken by Coffey that the SCD site was suitable for commercial / industrial use subject to implementation of a Site Environmental Management Plan (SEMP).
ERM 2019	ERM was engaged by Qantas to undertake a combined PSI and Detailed Site Investigation (DSI) at 263 Coward Street, Mascot, NSW (the Site). The investigation scope included the following: ■ completion of a site walkover; ■ a desktop review of the Site's environmental setting, publicly available records, site history; ■ soil investigations at 29 locations, including logging of soils and collection of samples for laboratory analysis; and ■ groundwater monitoring well installation and collection of groundwater samples at 5 locations for laboratory analysis. Fill material was encountered at all soil bore locations to depths of approximately 2.0 m BGL. Natural soils (sands) were encountered from these depths to the maximum investigation depth of 4.0 m BGL. Concentrations of CoPCs in soil samples were below the applicable screening criteria with the exception of the following: ■ Asbestos (Fines and Fibrous <7mm) exceeding the HSL-D at one location; ■ Copper and zinc exceeding the commercial/industrial EIL in two samples from one location; ■ Benzo(a)pyrene exceeding the commercial/industrial ESL at three locations; and ■ TRH C_{16}-C_{34} fraction exceeding the commercial/industrial ESL at one location. There were no visible fragments of asbestos observed during the investigation, and it is likely that the source of asbestos is the historical importation of uncontrolled fill material for levelling of the site. Concentrations of CoPCs in groundwater were generally below the adopted screening criteria, with the exception of the following: ■ Copper and zinc exceeding the ANZECC freshwater guidelines for 95% protection of species at five and four groundwater monitoring wells respectively; and ■ It is noted that various chlorinated and halogenated hydrocarbon analytes and benzo(a)pyrene Limit of Reporting (LORs) were above the threshold for the NEPM (1999) GILs and the NHMRC (2011) Recommended Drinking Water Guidelines – Health. As there were no detects for PAHs, VOCs or Hydrocarbons in groundwater, these results are not considered to be confirmed exceedances. Groundwater concentrations exceeding the adopted screening criteria for copper and zinc were not considered to be indicative of contamination originating at the Site and are more likely to be related to regional groundwater quality. ERM concluded that based on the results of this investigation that the environmental quality of soil and groundwater at the Site does not preclude the proposed development for continued commercial/industrial land use. It was recommended that a Construction Environmental Management Plan (CEMP) be prepared for any future construction works at the site which involve excavation below the current surface level.

Report ID	Summary of Investigation Works
Reditus 2019	Reditus were engaged by Qantas to undertake methane monitoring with the Qantas Stores buildings located within the north western portion of the Site (i.e. the SDC Site) and an inspection of the capping layer validated by Coffey to assess compliance with the Coffey 2006 EMP. Methane was monitored from building and vent pipework utilising a Hubeg Methane Detector. Concentrations of methane ranged from 0.00 ppm to 4 ppm (0.0004%v/v) which identified to be below the adopted action thresholds (0.05%v/v). Reditus identified a number of corrective actions associated with the capping layer including: ■ Voids under the main slab should be filled and building foundations inspected to assess for potential damage; ■ The garden bed located along the south of the building should be replanted to minimise the degradation of the capping layer within this area; ■ Qantas to assess site records to see if impacted soils in the vicinity of the area identified as BH8AD had been excavated and removed. Overall Reditus concluded that the cap was in good condition (subject to minor rectifications listed above), the building methane monitor was observed to be showing no faults and that methane was reported within assessed areas as below the action criteria levels. ■ Reditus recommended that methane monitoring should continue on an annual basis as per the requirements within the SDC Site EMP.
Reditus 2020	Reditus were engaged to undertake a data gaps assessment of the north eastern portion of the Site currently utilised by Suez and Woolworths. Reditus indicated that the site was to be redeveloped to a slab on grade industrial warehouse. The purpose of the investigation was to address potential data gaps associated with potential methane and LNAPL identified within previous investigations undertaken within this part of the Site. As part of the works, Reditus installed three groundwater monitoring wells around the location previously identified by Golder (2001) to contain LNAPL (BH12). Methane sampling was undertaken at the three newly installed wells and a number of previously installed wells installed in 2018. In addition, Reditus re-drilled several boreholes, that were previously classified as restricted solid waste / hazardous waste to determine the potential to lower the previously reported waste classification. Results of the investigation indicated the following: ■ LNAPL was not identified within any of the sampled wells including the wells installed around the previous occurrence (BH12). Concentrations of BTEX, TRH and PAH in groundwater were less than LOR. ■ Methane was detected at monitoring wells ranging from 0%v/v to 12.5%v/v however a flow reading of 0L/hr was reported within all monitoring locations. Reditus concluded that no special precautions are required. ■ The results of soil sampling indicated that waste materials formerly classified as restricted solid waste could be reduced to General Solid Waste based on leachable concentrations with the exception of material within the vicinity of BH2 / MW08RR which would be classified as hazardous waste.
JK 2020	JK were engaged by Becca Pty Ltd (Becca) to undertake additional intrusive works at the proposed catering facility (located within the north western portion of the Site) to further assess soils in the vicinity where asbestos was previously found and screen for the presence of methane gas in shallow soils along the western boundary of the Site. Investigation works included the excavation and sampling of 12 soil bores within the south western portion of the Site to a depth of approximately 2.5 m bgl, the collection of soil samples and methane screening from the annulus of excavated boreholes. ■ Results of the investigation identified asbestos in soils within 3 boreholes (BH101, BH106 and BH108) and JK concluded that asbestos was widespread throughout the assessed portion of the Site. ■ Hazardous ground gases (methane and carbon dioxide) were identified at concentrations that “could pose a risk to the proposed development”. JK concluded that prior to development remediation will be required to address asbestos contamination and a capping / management strategy (or equivalent appropriate approach) should be developed to manage the identified hazardous ground gases.

Report ID	Summary of Investigation Works
Reditus 2020a	Reditus was engaged by Dal Tech Pty Ltd (Dal tech) to undertake limited soil sampling to facilitate the installation of a data cable that entered the site area subject of this investigation. A total of 12 soil bores were excavated within the overall project area, with four soil bores excavated within the south eastern portion of the Site (subject to this investigation (BH1, BH2, BH3 and BH4). Results of the waste classification sampling classified materials as follows: ■ BH1 – General Soil Waste (GSW) Special Waste Asbestos; ■ BH2 – GSW; ■ BH3 – Hazardous Waste (due to elevated concentrations of OCP/ OPP); ■ BH4 – GSW Special Waste Asbestos. Information presented within Figure 1 of the report identified that the distance between BH1, BH2 and BH3 was approximately 10 – 15 m indicating that the identified elevated pesticides were likely to be limited to an area with a maximum diameter of approximately 30m.
Reditus 2021	Reditus was engaged by Qantas to undertake a PSI of the Site to support potential divestment planning. The primary objectives of the PSI were to: ■ Investigate the current and historical land uses of the Site; ■ assess the current condition of the Site; ■ identify the potential for environmental issue, concerns, risks and /.or liabilities associated with the present and historical uses of the Site; and ■ inform the Preliminary Conceptual Ste Model (CSM). A review of site history information indicated the prior to 1943 the site was utilised for market gardens. Following development the Site was utilised for a range of industrial uses including bottle storage. York Motors purchased the central portion of the Site in 1951 for vehicle maintenance and storage. In 1953 Rolls Royce acquired the southern portion of the Site for construction / testing and maintenance of aircraft engines. This portion of the Site was acquired by Joy Manufacturing in 1960 for the manufacturing of mining equipment. Qantas acquired the central portion of the site in 1968 with subsequent purchase of remaining blocks in 1980 and 1991. The Site is currently utilised for a range of purposes including: ■ Shipping container and skip bin storage by SUEZ; ■ small truck storage by Woolworths; ■ staff car parking and access roads to buildings; ■ commercial rooms used for training, presentations and office administration for Qantas; ■ workshops used for the maintenance of aircraft jet engines; ■ test cells for propeller aircraft engines and jet engine testing and calibration; and ■ paint spray booths and associated fume cupboards with paints, solvents and other chemical storage areas. It was notes that evidence of up to seven (7) historical underground storage tanks and one above ground storage tank. In reviewing previous environmental investigations Reditus identified the presence of asbestos containing materials (ACM), hazardous ground gases, petroleum hydrocarbons and pesticide impacted soil at several locations throughout the Site. Investigations undertaken by Reditus and reported within this PSI identified elevated concentrations of heptachlor (an organochlorine pesticide - OCP) at BH3 located within the central portion of the Site which would be considered as hazardous waste if requiring offsite disposal. Reditus also undertook an assessment of methane concentrations within areas of the SDC portion of the Site considered to be particularly susceptible to methane accumulation.

Report ID	Summary of Investigation Works
	The monitoring was undertaken in the vicinity of the vent pipes and well as confined spaces. ERM notes the assessment does not appear to have included soil gas monitoring. Reditus made the following conclusions based on the key findings of the monitoring: ■ The cap (described within the Coffey 20020 RAP) was in good condition over the majority of the SDC portion of the Site with the exception of erosion/settlement under the main building slab along the garden bed on the western side of the building. The other was the exposed soil/bare ground located within the narrow garden bed on the southern side of the building. ■ The building methane monitor was observed showing no faults and appeared to be functioning correctly. ■ Methane was reported at a maximum concentration of 4ppm (0.0004%v/v), well below the action criteria of 0.5%v/v reported within the Reditus report Based on the results of the PSI, the following Areas of Concern (AEC) were identified to pose a risk of potential contamination several potential sources and/or risks of potential contamination and required further investigation (**Figure 3**). ■ AEC1 – Delineation of Previously Identified Contaminants. ■ AEC2 – Uncharacterised Fill and historical contaminating activities prior to Qantas. ■ AEC3 – Underground Petroleum Storage Systems (UPSS). ■ AEC4 – Fire Training Areas (Information within the Reditus PSI indicates this was Fire Extinguisher training only). ■ AEC5 – Chemical and Waste Storage Areas and Spill Areas. ■ AEC6 – Wash Bays. ■ AEC7 – Methane Intrusion. ■ AEC8 – Electrical Transformers. No evidence of the current use and/or storage of materials containing per- and polyfluoroalkyl substances (PFAS) was observed. In addition, no fire suppression systems, deluge systems or PFAS containing firehoses were observed. Reditus noted that surrounding areas to the site, not owned by Qantas, are known to be contaminated by PFAS. Reditus conducted a desktop PFAS Assessment and concluded that due to reports of fire extinguisher training, it is possible that activities within the site may contribute to potential detections of PFAS. As such investigations were recommended to determine if PFAS is present, or otherwise, in identified areas. Based on information reviewed as part of the PSI, it was considered that further assessment of the Site was required to assess the potential for soil and / or groundwater contamination to be present associated with current and historical land use practices.
Reditus 2021a	Reditus were engaged by Qantas to undertake methane monitoring with the SDC located within the north western portion of the Site and an inspection of the capping layer validated by Coffey to assess compliance with the Coffey 2006 EMP. Methane was monitored from building and vent pipework utilising a Hubeg Methane Detector. Concentrations of methane ranged from 0.00 ppm to 12.3 ppm (0.00123%v/v) which identified to be significantly below the adopted action thresholds (0.05%v/v). Reditus identified a number of corrective actions associated with the capping layer including: ■ The garden bed located along the south of the building should be replanted to minimise the degradation of the capping layer within this area; and ■ Qantas to assess site records to see if impacted soils in the vicinity of the area identified as BH8AD had been excavated and removed. Overall Reditus concluded that the cap was in good conditions (subject to minor rectifications listed above), the building methane monitor was observed to be showing no faults and that methane was reported within assessed areas as below the action criteria levels. Reditus recommended that methane monitoring should continue on an annual basis as per the requirements within the Site EMP or that the EMP be updated to remove the requirement for ongoing methane monitoring where it can be demonstrated that monitoring was no longer required.

4. DATA QUALITY OBJECTVES

Based on the results of the previous investigations summarised within Section 4.0 and project objectives detailed within Section 1.3, ERM developed the following data quality objectives (DQOs) for this investigation.

The Data Quality Objectives (DQOs) for this SAQP have been developed in accordance with the ASC NEPM and the Australian Standard *AS4482 Guide to the Sampling and Investigation of Potentially Contaminated Soil*.

4.1 Step 1 – State the Problem

Previous investigations (summarised in Section 4.0) identified the potential for contamination to be present at the Site associated with a range of current and historical land use practices undertaken within the Site and surrounding area.

As such Qantas required a due diligence assessment to be undertaken to assess the nature and extent of potential contamination at the Site.

4.2 Step 2 – Identify the Decisions

Based upon the objectives of this investigation the decisions required to meet the objectives are summarised below:

- Is the data sufficient to address the objectives of the investigation?
- Is the data generated by sampling and analysis of an acceptable quality?
- Does the site contain soil, groundwater, surface water and /or sediment impacted by contamination resulting from current and historical land uses and if so, are there any potential unacceptable risks to human health and / or ecological receptors from contaminants in fill / soil and / or groundwater?
- Is there evidence of contamination exceeding adopted assessment criteria?
- Is additional information required to determine the potential liabilities/constraints associated with the proposed development?
- 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?

4.3 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 review of previous investigations summarised within Section 4.0;
- Results of Ground Penetrating Radar (GPR) surveys within the portion of the Site identified as AEC 3 and AEC 4;
- Field observations made during intrusive investigation works;
- Laboratory analytical data of collected soil, groundwater, surface water and sediment samples;
- Field measurements collected and observations made during intrusive investigation and groundwater monitoring rounds;
- Screening-level assessment criteria from guidelines made or approved by the NSW EPA as detailed within Section 7.0; and
- Confirmation of acceptable data quality by assessment of data quality assurance / quality control and comparison against Data Quality Indicators (DQIs).

4.4 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 and selected locations within adjacent surface water bodies as illustrated within Figure 1 and the maximum depth of investigation at each location;
- Temporal boundaries – the temporal boundary is limited to the data collected during investigation works detailed within this report (June / July 2021). As such, seasonality was not able to be assessed at this stage of the investigation;
- Constraints within the study boundaries – the following are limitations that required consideration within the development of the sampling strategy:
  - Access restrictions due to onsite building structures / car parking facilities and vehicle access requirements;
  - Ongoing access within operational portions of the site; and
  - Presence of underground and overhead utilities.

Proposed sample locations were selected taking into consideration the above factors.

4.5 Step 5 – Develop the Decision Rules

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

Table 4.1 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 potential source areas subject to this investigation? ■ Do field observations (including visual, olfactory, presence of anthropogenic materials in fill) indicate potential significant contamination at the investigation locations? ■ Does the collected analytical data exceed adopted screening-level assessment criteria? ■ Is there sufficient information to estimate the volume of fill material contained onsite? ■ 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 set 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 soil, groundwater, surface water and /or sediment impacted by contamination resulting from historical land uses	■ Collected soil, groundwater, surface water and sediment samples are to be analysed for CoPCs associated with current and historical land uses practices and results compared to relevant NSW EPA made / endorsed regulatory screening criteria.
Is there evidence of significant widespread contamination?	■ Collection of representative soil, groundwater, surface water and sediment samples during site investigation works.
Is additional information required to determine the potential liabilities/constraints associated with the proposed development?	■ If it is determined that additional information is required to further reduce the uncertainties associated with the distribution and characterisation of soil, groundwater, surface water and sediment 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 on the nature, extent, distribution and risk to identified receptors of contamination within environmental media? If no, additional investigation may be required,

4.6 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 4.2 Limits of Decision Error

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 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

4.7 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 potential risk to human health or the environment. The potentially contaminating sources and activities undertaken are associated with current and historical land uses undertaken within the Site.

Various strategies for developing a statistically based sampling plan are identified in the ASC NEPM including judgemental; random; systematic and stratified sampling patterns.

The adopted sampling rationale / strategy included the collection of supplementary samples locations to enable targeted assessment of key AECs and a broad grid based approach to enable characterisation for potential fill materials within the Site. The rationale for the adopted sampling approach is described in the table below and sample locations are illustrated on Figure 5:

Details on the investigation methodology and the specific number of sampling locations is presented within Section 6.0.

Table 4.3 Sampling Design Rationale

Media	Sample Location	Sampling Rationale
Soil	Test Pits	■ Test pits were excavated within areas of open space and portions of the site not constrained by operational buildings / vehicle access driveways / roads etc. ■ The purpose of test-pit sampling was to visually assess the potential composition and extent of fill materials / potential asbestos and to enable collection of representative samples of fill and natural materials.
	Soil Bores	■ Where access was constrained / restricted, soil bores were utilised to assess ground conditions. ■ The use of soil bores for the assessment of fill conditions is not a preferred sampling methodology, however for the purposes of this investigation and in consideration of access limitations the use of soil bores is considered acceptable.
Hardstand	Concrete / Bitumen	■ PFAS may sorb to concrete / hardstand and act as an ongoing secondary source of PFAS. ■ Samples of handstand (concrete and bitumen) were collected from areas identified to have potentially contained for fire extinguisher training.
Groundwater	Groundwater Monitoring Wells	■ Existing, accessible and operational groundwater wells located throughout the Site were developed, gauged and sampled to aid in the assessment of potential contamination to groundwater. ■ Groundwater monitoring wells were installed within the Site in locations targeting key AECs to assess the potential contamination associated with chemical / fuel storage, maintenance activities and the potential storage, handling and use of PFAS within the Site.
Surface Water / Sediment	Drainage Lines	■ Surface water / sediment samples were collected from onsite drainage lines to assess the potential for CoPCs to be migrating through onsite stormwater infrastructure.
Methane Field Screening	Existing and newly installed groundwater wells	■ Quantitative field screening for methane was undertaken at 16 groundwater monitoring wells located throughout the Site area utilising a land fill gas meter connected to gas caps on well casing. ■ Landfill gas screening was undertaken to provide qualitative assessment for potential presence of methane within the Site.

5. INVESTIGATION METHODOLOGY

The following table summarises the scope of works and methodology completed as part of this assessment. Field works were undertaken by suitably qualified ERM environmental scientists.

- Sampling locations are illustrated on **Figure 5**.

Table 5.1 Investigation Methodology

Task	Scope
1 – Project Preliminaries	Prior to the commencement of investigation works, ERM undertook the following: ■ Preparation of a site specific Health and Safety Plan (HASP) and associated Safe Work Method Statements (SWMS). ■ preparation and submission of required inductions / permits for the investigation works; and ■ engagement of subcontractors including underground utility locator, test pitting contractors and drillers.
2 – Service Location	Prior to the commencement of intrusive works, ERM undertook a review of available service plans, including Dial before You Dig and Qantas supplied site plans. The proposed investigation locations were cleared via an experienced underground utility locator with radio detection and Ground Penetrating Radar (GPR) equipment.
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 Photo Ionisation Detector (PID) was calibrated to an isobutylene standard at the beginning of each working day in accordance with manufacturer requirements and ERM's SOPs. ■ Water quality meters were calibrated by the rental supplier prior to use and relevant calibration certificates retained by ERM. ■ Calibration records are presented within **Appendix E.**
4 – Test Pitting	Test pitting was undertaken to assess potential fill materials within the Site. ■ Eight test pits were excavated to a maximum depth of 2.5 m bgl with a 5 tonne excavator. ■ Soils were logged by an appropriately trained and experienced scientist/engineer to record the following information: soil/rock 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. ■ Two primary samples (one fill and one natural) were analysed from each sampling location for chemical analysis. ■ 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 above); ■ Test pits were re-instated with excavated materials in the approximate order from which they were excavated, track rolled for nominal compaction and finished at surface with a layer of hot mix. ■ All samples collected were placed within laboratory-supplied containers / sample bags and transported to a NATA accredited laboratory analysis under chain of custody conditions for the required analysis. Duplicate and Triplicate spilt samples were collected as per the requirements outlined within the NEPM.

Task	Scope
5 – Soil Bores	To assess the nature and extent of fill materials within portions of the Site inaccessible for test pitting, a total of 9 soil bores were excavated to a maximum depth of 1.9 m bgl **(Figure 4)**. ■ Soil bores were 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. ■ Two primary samples (one fill and one natural) were analysed from each location for chemical analysis. ■ 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 above within Table 5.2); ■ During the advancement of all soil bores all soil samples were field screened with a calibrated photoionisation detector (PID) for the presence of ionisable volatile compounds. ■ All collected samples were placed within laboratory-supplied containers, stored in a chilled esky and transported to a NATA accredited laboratory analysis under chain of custody conditions for the required analysis.
6 - Sediment	Seven sediment samples were collected using a number of different methods including: gloved hand grab samples and a small hand trowel. Sediment samples were transferred into sample jars using a fresh pair of disposable nitrile gloves. ■ Sediment samples were collected from the sediment / water interface from drainage lines that appeared to be subject to regular flows of surface water.. ■ ERM notes that where possible, sediment and surface water sample locations were co-located, with surface water samples collected first to reduce the potential for cross contamination from disturbed sediments.
7 - Surface Water	Seven surface water samples were collected from onsite stormwater drains directly into the laboratory provided sampling containers. ■ Samples were collected to minimise disturbance to sediment to avoid excess sediment load in the sample, this included the collection of surface water sample at a given location, prior to the co-located sediment sample being collected. ■ Samples were collected from the middle of the water column present where possible / practical.
8 – Hardstand Sampling	Five samples of hardstand (concrete / bitumen) materials were collected from areas identified to have historically been utilised for fire extinguisher training. ■ To enable sample collection the concrete / bitumen surface was collected utilising a concrete coring drill / hammer and chisel. ■ The concrete / bitumen was crushed on-site using a decontaminated hammer). To prevent cross contamination with the surrounding concrete surface the concrete was crushed on a clean sheet of HDPE plastic. ■ The collected sample were then placed into laboratory supplied jars (as required) for sample analytical purposes using disposable nitrile gloves. ■ Upon completion of sampling, concrete surfaces were patched with a quick set concrete.

Task	Scope
9 - Groundwater Well Installation	Fifteen groundwater monitoring wells were installed to assess potential impact to underlying aquifer. ■ Groundwater monitoring wells were advanced to approximately 4.0 m bgl using various drilling methods including hand augering, non-destructive drilling, solid flight augering based on access and type of samples to be collected. ■ During the drilling of groundwater bores, all soil samples collected were field screened with a calibrated photoionisation detector (PID) for the presence of ionisable volatile compounds. ■ Groundwater monitoring wells were constructed using 50 mm machine slotted uPVC casing, washed filter sand and a bentonite clay seal. The screened interval was approximately 3.0 m in length. Wells were finished with flush mounted gatic covers. ■ Upon completion of drilling works, waste materials generated during drilling works were temporarily stored a skip bin in an area deemed suitable by Qantas pending disposal offsite by a licensed waste contractor. ■ After the installation, each groundwater monitoring well was developed. Wells were developed using disposable utilising bailers with field records detailing development volumes and parameters presented in **Appendix B**.
10- Groundwater Sampling	ERM undertook a groundwater-monitoring event of 9 existing and 12 newly installed groundwater wells located within the Site. ■ Due to the age of existing groundwater wells, all existing wells were re-developed through the use of a decontaminated stainless steel bailer. Development was undertaken until groundwater parameters stabilised. Field records summarising development volumes and parameters are presented in **Appendix B**. ■ Prior to sampling, the standing water levels and total well depth in each groundwater monitoring well were gauged using an oil/water interface meter from the top of well casing. ■ Samples were collected utilising a peristaltic pump. During sampling measurements of field parameters including Dissolved Oxygen (DO), Electrical Conductivity (Ec), Redox, pH, and Temperature were collected. ■ Collected samples were placed into laboratory provided sample containers and stored with a cooler box for transport to the laboratory under Chain-of -Custody procedures. ■ The samples were submitted to NATA accredited analytical laboratory for analysis in accordance with the proposed analytical schedule. Duplicate and Triplicate split samples were collected as per the requirements outlined within Table 5.2.
11 – Methane Survey	ERM undertook methane screening at 16 targeted newly installed and existing monitoring wells (**Figure 3**) located throughout the Site to assess the potential for methane to be present. Monitoring wells utilised for methane monitoring were fitted with a landfill monitoring gas cap for a period of 6 days prior to sampling. Monitoring was undertaken using a calibrated landfill gas meter (GFM430) with all concentrations in percentage by volume unless indicated otherwise below. During monitoring the following measurements were recorded: ■ Stabilised methane (CH_4) – measures the steady concentration of CH_4 following stabilisation; ■ Stabilised carbon dioxide (CO_2) – measures the steady concentration of CO_2 following stabilisation; ■ Stabilised Oxygen (O_2)– measures the volume of O_2 in gas well following purging of built up gases in the head of the well, reflects the rate of O_2 production/infiltration into the well; ■ Carbon monoxide (CO) – the stabilised CO concentration measured in ppm; ■ Hydrogen sulfide (H_2S) – the stabilised H_2S concentration measured in ppm; ■ Flow rate (L/hr) – measures the internal flow of air through the well into the instrument; ■ Barometric pressure (mb) – records the barometric pressure as measured at the monitoring well; and ■ Differential pressure (mb) – records the difference in pressure between gases built up in the well and the surrounding atmosphere.

Task	Scope
12 – GPR Survey	A Ground Penetrating Radar (GPR) survey was undertaken to assess the potential number and orientation of USTs located within the vicinity of AEC 3 / 4. ■ Due to the thickness of concrete /amount of reinforced steel within concrete slabs the results of the GPR survey were inconclusive. ■ Observations made during site investigation works identified a total of 7 vent pipes on the building structures with 1 vent pipe located of the eastern wall of the Theatre (THS) building and 6 vents located at the Archives Building (ARC) indicating a potential of 7 USTs within AEC 3 / 4.
13 - Equipment Decontamination	All reusable sampling equipment was decontaminated between sampling locations where designated disposable materials were not used. 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 (Liquinox) and deionised water; ■ rinsed with potable water; and ■ air dried. Rinsate samples were collected as per the requirements detailed above to assess the appropriateness of equipment decontamination.
14 – Laboratory Analysis	Primary samples were submitted to Eurofins and secondary samples to ALS Sydney both NATA accredited laboratory for the following requested analysis. **Potential Asbestos Fragments** ■ Asbestos (presence / absence); **Soil** – All samples analysed for: ■ Asbestos (presence / absence); ■ total recoverable hydrocarbons (TRH); ■ benzene, toluene, ethylbenzene and xylenes (BTEX); ■ semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs) and phenols; ■ volatile organic compounds (VOCs) including solvents such as trichloroethylene (TCE) and tetrachloroethene (PCE); and ■ heavy metals (Arsenic, Barium, Beryllium, Cadmium, Chromium, Mercury, Nickel and Zinc). ■ hexavalent Cr; and ■ Per and polyfluoroalkyl substances (PFAS). **Concrete / Hardstand** – All samples to be analysed for: ■ Per and polyfluoroalkyl substances (PFAS) and Australian Standard Leaching Procedure (ASLP) PFAS **Surface Water / Sediment -** All samples to be analysed for: ■ TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS. **Groundwater –** All collected samples analysed for: ■ TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS.
15 – QAQC	All field and laboratory Quality Assurance / Quality Control QAQC requirements were undertaken as per the requirements of the adopted DQO process.
16 - Waste Materials	Waste materials generated from sampling works were collected and stored in a skip bin within a designated area for subsequent appropriate off-site disposal. At the time of this report, waste materials had not been disposed due to COVID work restrictions and are still stored securely at theSite. All waste tracking records will be maintained and included within an addenda to this report.

6. ASSESSMENT CRITERIA

The site is an operational commercial / industrial facility located within a predominately commercial / industrial setting and as such screening criteria relevant to commercial / industrial land uses have been considered.

6.1 Soil and Groundwater Assessment Criteria

Soil samples collected from test pitting works will be screened against the below criteria:

Table 6.1 Soil and Groundwater Assessment Criteria

Media	Assessment Criteria
Soil	Human Health Soil contaminant concentrations will be compared against published values consistent with requirements in NEPM, 2013 sourced from the following: ■ **Health Investigation Levels** (HILs): ▪ HIL D (commercial / industrial). ■ **Health Screening Levels (**HSLs) for vapour intrusion: ▪ HSL D (commercial / industrial). ■ **Ecological Investigation Limits** ▪ Commercial and industrial land use (Ecological – Direct Contact) coarse and fine Management Limits ■ Management Limits for assessment of risks to human health in commercial and industrial settings will be applied subsequent to the above screening criteria. Aesthetic ■ Consideration was also given to the aesthetics of the soil encountered.
Groundwater	The Site is located within the Botany Groundwater Management Zone 2 with all domestic use of groundwater banned and industrial users required to undertake annual assessment of water and provide results to the NSW Office of Water to confirm the suitability of water for use For the purpose of this assessment, groundwater concentrations of contaminants will be compared against published values consistent with requirements in NEPM, 2013 sourced from the following in the specified order of preference: ■ Groundwater Health Screening Levels (HSLs) for vapour intrusion, as per the NEPM, 2013 o HSL D (commercial / industrial). Australian and New Zealand Environment Conservation Council (ANZECC) & Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000). On the basis that the most likely nearest potential surface water receptor is a fresh water body, Trigger Values for fresh water and 95% protection levels (unless otherwise noted) have been adopted. Comparison against these criteria is considered conservative as some attenuation of chemical constituents would be expected prior to groundwater at the site reaching the nearest potential surface water receptors. Ecological ■ Australian and New Zealand Environment Conservation Council (ANZECC) & Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZAST, August 2018). ■ On the basis that the most likely nearest potential surface water receptor (Alexandra Canal) is a highly disturbed fresh - brackish water body, trigger values for fresh water and 95% protection levels (unless otherwise noted) have been adopted. Comparison against these criteria is considered conservative as some attenuation of chemical constituents would be expected prior to groundwater at the Site reaching the nearest potential surface water receptors.

6.2 PFAS Specific Assessment Criteria

The following sections describe the assessment criteria to be used based on the identified land use scenarios.

6.2.1 Soil Criteria

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

Table 6.2 PFAS Soil Assessment Criteria

Land use Scenario	Source and Rationale		
	PFOS and/or PFHxS	PFOA	Comment
Health Based Guidance Values			
Commercial / Industrial	20 mg/kg	50 mg/kg	■ Assumes 8 hours is spent indoors and 1 hour spent outdoors at a site such as a shop, office, factory or industrial site. If the typical exposure for a site is predominantly outdoors with significant earthen areas, recalculation of a site-specific value is recommended. These were derived using the methodology consistent with assumptions set out in the ASC NEPM for HIL D.
Ecological Guideline Values			
Ecological direct exposure	1 mg/kg	10 mg/kg	■ Soil results collected from the sites will be assessed against the ecological direct exposure 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.' ■ While ERM has screened results against this criteria, however as the site and surrounding area is comprised of commercial / industrial land use the use of this guidance is considered to be conservative and not aligned with the sensitivity of identified on / off-site receptors.
Ecological indirect exposure	0.01 mg/kg	NA	■ Soil results collected from all sites will be assessed against the interim soil – ecological indirect exposure 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. ■ While ERM has screened results against this criteria, as the site and surrounding area is comprised of commercial / industrial land use the application of this guidance is considered to be conservative and not aligned with the sensitivity of identified on / off-site receptors

6.2.2 Groundwater

Screening criteria for groundwater will be adopted as per the below table.

Table 6.3 PFAS Groundwater Assessment Criteria

Land use Scenario	Rationale and Adopted Groundwater Criteria		
	PFOS / PFHxS	PFOA	
Ecological – Fresh Water	0.00023 µg/L (99% protection); 0.13 µg/L (95% protection);	19 µg/L (99% protection); 220 µg/L (95% protection;	■ Groundwater and Surface water screening criteria are sourced from Table 1 Draft Commonwealth Environmental Management Guidance (2016) which summarises the draft (as yet unpublished) guideline values developed for inclusion in the future revision of the ANZECC&ARMCANZ (2000) document “Australian and New Zealand Guidelines for Fresh and Marine Water Quality”. ■ These guidelines are derived for a range of species protection levels, depending on the nature of the aquatic ecosystem, with 99% species protection values applicable to high conservation value / largely unmodified systems, 95% protection values applicable to slightly to moderately disturbed systems, and lower protection levels (90% and/or 80%) applicable to highly disturbed systems. ■ In addition, ANZECC&ARMCANZ (2000) recommend that for bio accumulative compounds, the 99% level be used for slightly to moderately disturbed ecosystems, unless site-specific assessment of risks due to bioaccumulation through the food chain is undertaken. ■ Based on the nature of the off-site receiving environment being the NSW EPA regulated Alexandra Canal, the use of the 95% criteria to assess concentrations of CoPCs in groundwater is considered appropriate to assess potential risk to identified offsite receptors. ■ While ERM has screened results against this criteria, as the site and surrounding area is comprised of commercial / industrial land use, the application of this guidance is considered to be conservative and not aligned with the sensitivity of identified on / off-site receptors
Human health – Recreation	2 µg/L (PFOS + PFHxS)	10 µg/L	■ Recreational criteria has been sourced from the NHMRC 2019 guidance utilising refined estimates of water ingestion while swimming etc. ■ ERM notes that the degree of conservatism in recreational water guidance values (90% attributed to other exposure pathways) means that exceeding these values does not constitute a risk if other pathways are controlled.

6.2.3 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; and
- 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 commercial / industrial (NEMP 2020) have been adopted to assess potential health risks due to direct contact with sediment by human receptors;
- Interim Soil – ecological direct exposure (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; and
  - As an interim measure the NEMP recommends the human health value of 1 mg/kg be used to assess soil and this has been used to provide an indication the exposure of organisms to concentrations in sediment.

6.3 Methane Screening Criteria

Methane concentrations and the calculated risk levels were screened against the relevant sections of the following guidance:

- NSW EPA (2016) Environmental Guidelines Solid Waste Landfill 2nd Edition; and
- NSW EPA (2020) Assessment and Management of Hazardous Ground Gases, May 2020.

To assess the risk posed to current or future buildings (and their occupants) by methane on the site, a gas risk assessment was performed according to the methodology set out in the NSW EPA (2020) Hazardous Ground Gases guidelines for a level 2 risk assessment. The method requires the calculation of the site Characteristic Situation score (CS) based on a Gas Screening Value (GSV) as determined by data collected from the site. This CS score is then used to determine what protection measures are appropriate to mitigate potential risks posed by hazardous ground gases.

7. INVESTIGATION RESULTS

The following sections summarise the results of the investigation works undertaken by ERM. Investigation locations are illustrated on **Figure 5**. A photographic log illustrating site conditions is presented within **Appendix D**.

7.1 Field Observations

The lithology observed during investigation works is presented in the borelogs in **Appendix C** and summarised in **Table 7.1** below. **Figure 6** illustrates the estimated depth of fill across the site based on conditions encountered during this investigation and previous investigations undertaken within the Site

Table 7.1 Summary of Observed Lithology

Lithological Unit	Description	Depth (m BGL)
Hardstand	■ Bitumen and concrete or compacted sandy gravel, poorly sorted, sub rounded to angular grains, fine to coarse grained.	■ 0 – 0.2
Fill	■ Fill materials were identified to be variable across the site but generally comprised, pale grey / brown gravelly sand, poorly sorted, fine to coarse grained, rounded to angular grains; and blue/white/red sandy, gravelly clay, firm, moist, moderately to highly plastic, contains brick, concrete fragments, steel, plastic. ■ Potential asbestos fragments were noted within 3 locations (Figure 7a). ■ Due to the depth of fill and water ingress within test pits / soil bores, several locations were terminated within fill material (**Appendix C**).	■ 0.75 – 4.4 (maximum depth of investigation)
Natural	■ Black / brown clayey sand or sand, well sorted, fine to medium grained, sub rounded to sub angular grains	■ 0.75 – 4.0

Field screening results and visual and olfactory observations of soil samples are presented in the borelogs in **Appendix C**.

Visual or olfactory Indicators of contamination such as staining or odours were not observed during sampling of fill materials and natural soils. ERM notes that anthropogenic inclusions such as bricks, concrete, metal, wood, paper and plastic was noted within fill throughout the Site. Potential ACM fragments were noted within fill materials during excavation of locations GW207 and SP237. These fragments were collected and submitted for subsequent laboratory analysis.

Hydrogen sulphide type odours were recorded within natural sands, however this is considered to be consistent with regional observations within the Botany Sands.

PID field screening results were reported at a maximum of 4.8 parts per million by volume (ppm v) within test pit TP212 at a depth of 1.2 m bgl, indicating low levels of ionisable volatile compounds within the soils sampled.

Figure 6 (Appendix A) illustrates the estimated fill thickness across the site based on field observations made during current and previous investigation works. As outlined above, fill materials were generally observed to a depth of between 0.1 – 4.4 m bgl (maximum depth of the investigation) across the site. Deeper fill materials were generally observed within the south western portion of the Site extending to the maximum of 4.4 m bgl within GW235,

Based on field observations made during investigation works, it is considered that fill materials are likely associated with levelling of the Site for historic construction purposes.

7.1.1 Groundwater Investigation

Groundwater gauging and sampling works were undertaken on the 24th and 25th June 2021 for existing onsite wells and the 2nd - 5th July 2021 for newly installed wells. Groundwater was identified within the Site at depths ranging from 1.4 m btoc (GW235) to 2.49 m btoc (GW207).

During groundwater sampling works groundwater was generally characterised as silty, dark brown in colour with a slight organic odour. During sampling no indication of sheen, LNAPL or significant odours were recorded.

A mild H_2S type odour was recorded within MW01, MW02 and MW05 located within the northern portion of the Site however this is considered consistent with the underlying Botany Sands and not considered to be indicative of anthropogenic contamination. A mild hydrocarbon odour was noted within BH13 located within the central portion of the Site.

Field parameters collected during sampling works indicted the following:

- pH ranged from 5.76 (GW219) to 8.15 (GW235) indicating slightly acidic to slightly alkaline conditions;
- Dissolved Oxygen (DO) ranged from 0.01ppm (GW233) to 1.02 ppm (GW219) indicating anaerobic conditions;
- Conductivity ranged from 218 µs/cm (X8) to 6480 µs/cm (GW223) indicating slightly brackish conditions; and
- Eh (redox potential) ranged from -237 mV (GW235) to -2 mV (X4).

Based on measured depth to groundwater and surveyed elevations of sampled groundwater wells, groundwater (**Table 1**) was estimated to be flowing in a south westerly direction (**Figure 7d**).

7.1.2 Surface Water and Sediment

Surface water and sediment sampling works involved the collection of samples from onsite stormwater drainage infrastructure was undertaken on 2nd July 2021. ERM notes that during investigation works, rainfall occurred daily and as such surface water drains were identified to contain running water, Surface water was observed to be brown and turbid. No sheen or indicators of anthropogenic contamination were noted.

Sediments were recorded to be fine grained sands, with no visual / olfactory indicators of contamination such as staining or odours. PID field screening results were reported at a maximum of 0.1 ppm v, indicating low levels of ionisable volatile compounds within the sediments sampled

7.2 Analytical Results

7.2.1 Soil Investigation

Sampling locations are presented on **Figure 5 (Appendix A)**. Tabulated analytical results are presented in **Tables 1a – 1d Appendix B**. Analytical certificates are presented in **Appendix F.** The location of soil samples exceeding the adopted screening criteria is presented within **Figure 7a (Appendix A)**.

Laboratory analysis of collected soil samples returned concentrations of CoPCs less than the adopted assessment criteria and / or LOR with the exception of the following:

- Copper, Nickel and Zinc which exceeded the adopted EILs at a number of investigation locations throughout the Site;
- Benzo(a)Pyrene (B(a)P) which exceeded the adopted commercial industrial ESLs within shallow fill materials at locations GW235, BH215, SP236, TP214 and TP213.

- PFOS exceeded the adopted ecological indirect contact criteria in TP202 located within the south eastern portion of the Site (PFOS 0.083 mg/kg compared to guideline of 0.01 mg/kg). Based on the nature of the site (commercial / industrial where hard cover is present over the large proportion of the site in an urban setting) this exceedance of ecological criteria is not considered to pose an unacceptable risk to onsite receptors.

Asbestos was detected within the following samples:

Table 7.2 Summary of Asbestos Results

Sample ID	Media	Description
TP12_1.2	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.017%w/w
TP214_ACM	Fragment	Chrysotile, amosite and crocidolite asbestos detected (fragment)
SP237_0.7	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.021%w/w
SP237_ACM	Soil Sample	Chrysotile and amosite asbestos detected (fragment – stockpile area)
BH208_0.3	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.0082%w/w **No asbestos detected at reporting level of 0.01%w/w**
SW_Frag	Soil Sample	Chrysotile and amosite asbestos detected (fragment)
SED249	Fragment	Amosite asbestos detected Total estimated concentration 0.00000018%w/w **No asbestos detected at reporting ;level of 0.01%w/w**
GW207_0.6	Soil Sample	Chrysotile, amosite and crocidolite asbestos detected Total estimated concentration 0..024%w/w
TP202_0.3	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.0000097%w/w **No asbestos detected at reporting level of 0.01%w/**w
GW233_2.5	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.0034%w/w
GW233_4.0	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.0033%w/w **No asbestos detected at reporting level of 0.01%w/w**
GW235_3.0	Soil Sample	Chrysotile, amosite and crocidolite asbestos detected Total estimated concentration 0.015%w/w
GW233_3.0	Soil Sample	Chrysotile asbestos detected Total estimated concentration 0.029%w/w

Laboratory analysis returned concentrations of all other CoPCs within all collected samples less than LOR and / or the adopted commercial / industrial HIL / HSL land use criteria.

Additional samples of hardstand materials (HS240, HS241, HS242, HS243 and HS244), were collected from the surface of the former fire extinguisher training area to assess the potential for PFAS to be present associated with former fire extinguisher training (**Figure 5**).

- Laboratory analysis of collected samples returned concentrations of PFAS less than LOR within all collected samples. Based on the nature of potential training (fire extinguisher) and the results of collected samples all returning concentrations within surface materials of less than LOR, it is the opinion of ERM that the risk of PFAS associated with former fire extinguisher training within this portion of the site is likely to be low.

7.2.2 Groundwater Investigation

Sampling locations are presented on **Figure 5 (Appendix A)**. Tabulated analytical results for groundwater are presented in **Tables 2a – 2d Appendix B**. Analytical certificates are presented in **Appendix F.** The location of groundwater samples exceeding the adopted screening criteria is presented within **Figures 7b**.

Laboratory analysis of collected groundwater samples returned concentrations of CoPCs less than the adopted assessment criteria and / or LOR with the exception of the following:

- Arsenic exceeding the adopted 95% freshwater criteria within GW22;
- Copper exceeding the adopted 95% freshwater criteria within GW219, GW216, GW222, GW223, and GW228 ranging from 0.02 µg/L (MW02) to 0.07 µg/L (MW07);
- Sum of PFOS + PFHxS exceeding the adopted 95% freshwater criteria within GW216 (0.47µg/L) and GW223 (0.2) µg/L);
- Sum of PFOS + PFHxS exceeding the adopted recreational water criteria within GW228 (3.22 µg/L) located within the south western portion of the Site;
- Sum of PFOS + PFHxS exceeding the adopted recreational water criteria within GW201 (20.8 µg/L), GW252 (4.2 µg/L) , GW253 (3.62 µg/L) and GW254 (0.9 µg/L) located within the south eastern portion of the Site; and
- TRH C_{10}-C_{16} and C_{16}-C_{34} above LOR but less than the adopted screening criteria was identified within groundwater samples collected from BH13, GW216, GW219 and GW228.

Laboratory analysis returned concentrations of all CoPCs within all collected samples less than LOR and / or the adopted commercial / industrial HIL / HSL land use criteria.

7.2.3 Surface Water and Sediment Investigation

Sampling locations are presented on **Figure 5 (Appendix A)**. Tabulated analytical results are presented in **Tables 1a-1d and Table 2a-2d Appendix B**. Analytical certificates are presented in **Appendix F.** The location of sediment and surface water samples exceeding the adopted screening criteria is presented within Figures 7a and 7b respectively.

Laboratory analysis of collected surface water / sediment samples returned concentrations of CoPCs less than the adopted assessment criteria and / or LOR with the exception of the following:

- TRH C_{10}-C_{16} and C_{16}-C_{34} which exceeded the adopted commercial / industrial ESLs within sediment sample SED247 located within the western portion of the Site and SED251 located within the eastern portion of the Site.

Laboratory analysis returned concentrations of all CoPCs within all collected samples less than LOR and / or the adopted commercial / industrial HIL / HSL land use criteria.

7.2.4 Methane Field Screening

Sampling locations are presented on **Figure 5 (Appendix A)**. Tabulated analytical results are presented in **Tables 5 Appendix B**.

Field screening results collected during methane screening identified the following:

- Measured CO_2 readings were highest in within monitoring well MW05 located within the north-east area of the site recording a maximum stabilised CO_2 reading of 12.9% v/v;
- Carbon monoxide (CO) concentrations ranged from 0ppm - 3ppm. The highest reading of 0.3ppm coming at GW216. There were no hydrogen sulphide (H2S) detections across the site; and

- Flow rates were generally low across the site, ranging from -19.2 L/hr to 1.0 L/hr (MW05). Wells GW216 and X8 displayed a significant negative flow in comparison to the rest of the site.

Methane was detected within the following sampled monitoring wells (Figure 5):

- MW01 (north eastern portion of the Site) – 4.4% v/v with a measured flow rate of 0.5L/hr;
- MW107 (northern portion of the Site– 51%v/v with a measured flow rate of 0.0 L/hr; and
- MW05 (northern portion of the Site) - 9.2 %v/v with a measured flow rate of 1.0L/hr.

Refer to **Appendix B – Table 5** and **Figure 5 – Sampling Locations**.

Gas screening values (GSV) were calculated for CH_4 and CO_2 for all monitored wells (**Appendix B** – Table 5). In accordance with requirements outlined within the Ground Gas Guidelines, the GSV was also calculated assuming the worst case scenario by multiplying the maximum recorded flow rate with the maximum gas concentration in any other well as follows:

- GSV = Maximum borehole flow rate (L/hr) x Maximum gas concentration (%).

The monitoring data indicated a maximum flow rate of 1.0 L/hr with a maximum carbon dioxide concentration of 12.9% and maximum methane concentration of 51.0%, which gives a GSV of 0.129 (CO_2) or 0.510 (CH_4). The worst case value of 0.510 has been adopted as the GSV for the site based on this gas data set.

- Based on a GSV of 0.51, the site falls within the characteristic situation CS 2 indicating “low risk”.

Table 7.3 (below) has been reproduced from the Ground Gas Guidelines to illustrate how the risk classification system works.

Table 7.3 Gas Risk Classification

GSV threshold (L/hr)	CS	Risk Classification	Additional Factors	Typical Sources
<0.07	1	Very low risk	Typically, methane <1% v/v and/or carbon dioxide <5% v/v, otherwise consider increase to CS 2.	Natural soils with low organic content. Typical fill
<0.7	2	Low risk	Borehole flow rate not to exceed 70L/hr; otherwise consider increase to CS 3.	Natural soils with high organic content. Recent deep fill.
<3.5	3	Moderate risk		Old inert waste landfill. Flooded mine workings.
<15	4	Moderate to high risk	Consider need for level 3 risk assessment	Mine workings susceptible to flooding. Closed putrescible waste landfill.
<70	5	High risk	Level 3 risk assessment required	Shallow, unflooded abandoned mine workings
>70	6	Very high risk		Recently used putrescible waste landfill

Using the CS2 value, based on the maximum onsite measured methane concentration of 51% v/v, and nature of onsite commercial / industrial land uses, a gas protection score of 2 was calculated (refer to

Table 7.4 below). The gas protection score provides an indication of the design of measures or elements required to manage potential risks.

Table 7.4 Gas Protection Guidance Values

Characteristic gas situation (CS)	Required gas protection guidance value				
	Low density residential	Medium–high density residential (strata title)	Public buildings, schools, hospitals, shopping centres	Standard commercial buildings (offices, etc.)	Large commercial (warehousing) and industrial buildings
1	0	0	0	0	0
2	3	3	3	2	1 (a)
3	4	3	3	2	2
4	6 (b)	5 (b)	5	4	3
5	_ (b)	6 (b)	6 (c)	5	4
6	_ (d)	_ (d)	6 (c)	6	6

(a) If maximum measured methane concentration exceeds 20% v/v, increase to CS 3.

(b) Residential development is not recommended at CS 4 and above without pathway intervention (for example, source depressurisation or control of lateral migration) external to the buildings and a high level of management. These requirements necessarily preclude low-density residential (NEPM HIL A residential) development.

(c) Evacuation issues and social risks must be considered.

(d) Level 3 risk assessment is required

The calculated gas protection guidance value of 2, indicates that gas protection measures may be required for future potential developments on-site.

8. CONCEPTUAL SITE MODEL

ERM has developed the below CSM based on previous investigations and the results of this investigation including site observations made during intrusive works and laboratory analysis of collected samples.

Area Environmental Concern	Assessed CoPCs	Potential Pathways	Potential Receptors	Comments Based on Results of Investigation	Updated CoPCs	Potentially Complete SPR Linkages	
						Human Health	Ecological
AEC1 – Delineation of Previously Identified Contaminants.	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through excavation and transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users. ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater.	■ Previous investigations undertaken by Reditus identified OCP/OPP within the central portion of AEC-1 in an area identified to extend to an estimated 30 m diameter (area between sampling locations). ■ Results from these investigation works returned concentrations of CoPCs less than LOR for OCP/OPP from location BH208 located approximately 5m north of the previous Reditus location indicting the identified pesticides are localised and unlikely to be widespread. ■ ERM notes as outlined within the Reditus PSI, the area was identified to have potentially contained historical chemical storage sheds and as such, based on results collected from current and historical investigations within and surrounding AEC-1, the previously identified elevated OCP/OPP concentrations may be associated with an isolated hotspot and not indicative of significant or widespread contamination.	■ OCP/OPP	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated soils where soils are disturbed. ■ Transport of contaminants through excavation and transport	■ NA
AEC2 – Uncharacterised Fill (stockpiled) and historical contaminating activities prior to Qantas.	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through excavation and transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users. ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater.	■ Asbestos was detected during this investigation within the stockpiled material. All other chemical CoPCs were identified to be less than the adopted screening criteria. ■ The stockpile is currently vegetated and is unlikely to pose a low risk of harm to onsite receptors in its current form, however consideration should be given to covering the stockpile to prevent windblown emissions of dust should vegetation die or the stockpile be eroded during periods of heavy rainfall etc.	■ Asbestos	■ Inhalation ■ Transport of contaminants through excavation and transport	■ NA
AEC3 – Underground Petroleum Storage Systems (UPSS).	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils during intrusive works. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users. ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater.	■ Minor exceedances of EIL for various heavy metals, were identified in groundwater. As concentrations are consistent with those identified throughout the Site, this is considered to be indicative of background concentrations rather than onsite sources of heavy metals ■ All other chemical CoPCs (within soil and groundwater) were identified to be less than the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors. ■ ERM notes that at the time of this report, USTs were still present within the site and required appropriate decommissioning. It is considered that while hydrocarbons were not identified within soil / groundwater that would indicate the potential for significant or widespread contamination to have occurred, consideration should be given to the management of impacted soils during decommissioning of onsite USTs.	■ Heavy metals ■ Hydrocarbons (potential in UST tank pit sands)	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated groundwater waters / soils (if present) during excavation works within the vicinity of USTs ■ Transport of contaminants through mechanical transport	■ Due to the nature of the Site, risks to onsite ecological receptors from identified EIL exceedances are considered to be unlikely

Area Environmental Concern	Assessed CoPCs	Potential Pathways	Potential Receptors	Comments Based on Results of Investigation	Updated CoPCs	Potentially Complete SPR Linkages	
						Human Health	Ecological
AEC4 – Fire Extinguisher Training Areas.	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users. ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater.	■ During site inspection works, ERM noted that several fire extinguishers were located within the fire extinguisher training area. It was noted that the fire extinguishers were labelled as dry powder extinguishers. ■ Minor exceedances of EIL for various heavy metals, were identified in groundwater bores within and surrounding the fire extinguisher area however this is considered to be indicative of background concentrations rather than onsite sources of heavy metals ■ All other chemical CoPCs (within hardstand, soil and groundwater) including PFAS were identified to be less than LOR and / or the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.	■ NA	■ NA	■ NA
AEC5 – Chemical and Waste Storage Areas and Spill Areas.	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users. ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater..	■ Field observations made during site investigation works identified fill material containing anthropogenic inclusions within test pit / boreholes located within this portion of the Site. Fill materials were identified to extend to the maximum depth of investigation (4.4 m bgl). ■ Minor exceedances of EIL for various heavy metals, were identified in groundwater however this is considered to be indicative of background concentrations rather than onsite sources of heavy metals. ■ TRH exceeding LOR but less than the adopted assessment criteria were identified within samples collected from GW228. ■ PFAS exceeding the adopted recreation criteria was identified within collected groundwater samples. ■ The presence of an oil / water separator within AEC-5 that was reported to have historically been used for the collection of waste water from the Jet Test Cell which would have included fuels, oils, grease and liquids potentially containing PFAS. ■ Based on the proximity of GW228 to the oil / water separator, the identified south westerly groundwater flow within this portion of the Site and results from surrounding monitoring wells returning concentrations less than adopted health based criteria, the identified PFAS within GW228 may be attributable to the former oil / water separator and not indicative of significant or widespread PFAS contamination. ■ The proximity of GW228 to the site boundary suggests the potential for offsite migration of PFAS to have occurred. Consideration should be given to selective / targeted source zone removal of potential PFAS impact associated with the oil / water separator and ongoing monitoring to assess effective removal.	■ PFAS.	■ Offsite recreational users of surface waters	■ Offsite ecological receptors\ ■ Due to the nature of the Ste risks to onsite ecological receptors from identified EIL exceedances are considered to be unlikely
AEC6 – Wash Bays.	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users; ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater..	■ Minor exceedances of EIL for various heavy metals, were identified in groundwater within wells located to the east and west of the wash bay area however this is considered to be indicative of background concentrations rather than onsite sources of heavy metals ■ All other chemical CoPCs (within soil and groundwater) including PFAS were identified to be less than LOR and / or the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.	■ Metals	■ NA	■ Due to the nature of the Site, risks to onsite ecological receptors from identified EIL exceedances are considered to be unlikely

Area Environmental Concern	Assessed CoPCs	Potential Pathways	Potential Receptors	Comments Based on Results of Investigation	Updated CoPCs	Potentially Complete SPR Linkages	
						Human Health	Ecological
AEC7 – Methane Intrusion.	■ Methane Screening ■ Carbon Dioxide ■ Carbon Monoxide ■ Hydrogen Sulphide	■ Inhalation / build-up of hazardous ground gases	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Workers carrying out development, installation or maintenance works within the site.	■ Elevated methane has been identified within the Site boundary during previous investigations. ■ Previous investigations undertaken by Reditus identified a low risk of harm from methane within onsite building structures ■ Previous investigations undertaken by JK identified elevated methane within the north eastern portion of the Site that may pose a risk to future receptors. ■ Elevated methane was identified within three monitoring wells (MW01, MW107, MW05) located within the northern and north eastern portion of the Site. It is noted that elevated methane with a flow rate was observed at MW01 and MW05 that indicates the potential for ground gases to be present requiring management with a calculated site GSV rating of 0.51 indicating a low risk. ■ Based on results from the JK 2020 investigation and the gas protection guidance value of 2 calculated as part of this investigation, ERM considers that that gas protection measures may be required for future potential developments on-site. It is noted however the GSV and CS have been calculated utilising results from a single monitoring event utilising groundwater monitoring wells. ■ Differential pressure and flow rates were measured to be low or negative across the site. ■ Results from other ground gases sampled (CO, H_2S) revealed very minor and no detections respectively that are unlikely to indicate future risk to site users.	■ Methane	■ Current and future site users ■ Vapour intrusion	■ NA
AEC8 – Electrical Transformers	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users; ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site industrial users of groundwater.	■ ERM notes that at the time of this investigation, the onsite transformer was live / operational and located on a concrete slab. ■ Due to the presence of live services associated with the transformer intrusive works were not possible within close proximity to the transformer. As such two surface samples were collected from material surrounding the transformer. As any contamination arising from the transformer is likely to impact surface soils, this approach was considered appropriate for screening purposes. ■ All CoPCs were identified to be less than LOR and / or the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.	■ NA	■ NA	■ NA

Area Environmental Concern	Assessed CoPCs	Potential Pathways	Potential Receptors	Comments Based on Results of Investigation	Updated CoPCs	Potentially Complete SPR Linkages	
						Human Health	Ecological
General Site Area	■ Asbestos, TRH, BTEX, SVOCs, PAHS, VOCs, Heavy Metals, Hexavalent Chromium and PFAS	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contamination through surface water flows. ■ Transport of contamination to underlying groundwater aquifers ■ Transport of contaminants through mechanical transport	■ Potential offsite receptors (Alexandra canal and downgradient water bodies). ■ Current and future site users; and ■ Workers carrying out development, installation or maintenance works within the site. ■ Future potential on-site users of groundwater.	■ Field observations made during site investigation works identified fill material at variable depths throughout the Site including a range of anthropogenic inclusions within test pit / boreholes located with the central and south western portion of the Site. Fill materials were identified to extend from approximately 1.5 m in depth in the northern portion of the Site to the maximum depth of investigation (4.4 m bgl) within the south eastern portion of the Site. ■ Previous investigations undertaken by Golder in 2011 identified LNAPL within the northern portion of the Site. Further investigations by Reditus within the northern portion of the Site targeting the former LNAPL, concluded that the LNAPL is unlikely to be present within the Site. ■ Previous investigations have identified asbestos within shallow fill in various locations throughout the Site. Asbestos was detected during this investigation at several locations in shallow and deeper fill. Based on the distribution of asbestos, it is likely to be associated with historical filling of the site. The potential for additional asbestos within fill materials across the site requires consideration. ■ Where intrusive works are planned to be undertaken an Environmental Management Plan (EMP) should be prepared that outlines the require management processes to mitigate risks to human health. ■ PFAS was detected within soil and groundwater within the south eastern portion of the Site. ERM notes that elevated PFAS was identified within monitoring well GW201 (20.8 µg/L). ■ An additional 3 groundwater wells were installed within the vicinity of GW201 which returned concentrations ranging from GW252 (4.2 µg/L) , GW253 (3.62 µg/L) and GW254 (9.9 µg/L). Based on the calculated flow direction (south west), concentrations of PFAS within additional wells and that the area of the site is currently and has historically been used for car parking purposes, it is considered likely that the elevated PFAS within GW201 is likely to be a localised hotspot and may not be indicative of a widespread impact. ■ It is further noted that based on concentrations within monitoring wells GW206 and GW219 located to the south west of monitoring well GW201 being less than LOR, ERM considers that the identified elevated PFAS within the south eastern portion of the Site is likely to be localised and not likely to have resulted in widespread impact to the Site. ■ Minor exceedances of EIL for various heavy metals, were identified in groundwater however this is considered to be indicative of background concentrations rather than onsite sources of heavy metals ■ All other chemical CoPCs were identified to be less than the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.	■ Asbestos ■ PFAS ■ Heavy Metals	■ Dermal contact, inhalation, and / or incidental ingestion with contaminated surface waters / soils. ■ Transport of contaminants through mechanical transport	■ PFAS – potential risks to ecological receptors from identified soil and groundwater impact ■ Due to the nature of the Site, risks to onsite ecological receptors from identified EIL exceedances are considered to be unlikely

9. DISCUSSON

ERM was engaged by Qantas to undertake a Due Diligence Contamination Assessment at the site identified as Lot A – Coward Street and Kent Road, Mascot, NSW (the Site).

This assessment was undertaken to enable collection of additional data to supplement existing information from previous investigations and refine the understanding of potential contamination associated with current and historical land use practices undertaken within the Site

In undertaking this investigation ERM completed a review of previous investigations and subsequent site investigation works involving test pitting, soil boring and groundwater well installation targeting previously identified AECs and a groundwater monitoring event of newly installed and exiting monitoring wells.

Information provided within previous investigations indicted that the site has been used for a range of commercial / industrial purposes since the 1940s that has resulted in the presence of asbestos containing materials (ACM), hazardous ground gases, petroleum hydrocarbons and pesticide impacted soil at several locations throughout the northern and central portion of the Site.

Based on the results of this investigation, ERM concludes the following:

- Field observations made during site investigation works identified fill material at variable depths throughout the Site including a range of anthropogenic inclusions within test pit / boreholes located with the central and south western portion of the Site. Fill materials were identified to extend from approximately 1.5 m in depth in the northern portion of the Site to the maximum depth of investigation (4.4 m bgl) within the south eastern portion of the Site.
- Results of the GPR survey to assess the number / orientation of USTs within AEC 3 / AEC 4 was inconclusive due to interference from reinforced steel within surface concrete, however based on vent pipes visible on the building structure it is estimated that a total of 7 USTs are present. Analytical results from groundwater samples collected from groundwater wells within the vicinity of the USTs returned concentrations of CoPCs less than the adopted assessment criteria and / or LOR indicating that there is a low risk of significant / widespread contamination within underlying soil / groundwater from onsite USTs.
    - At the time of this report, USTs were still present within the site and required appropriate removal or decommissioning. It is considered that while hydrocarbons were not identified within soil / groundwater that would indicate the potential for significant or widespread contamination to have occurred, consideration should be given to the management of impacted soils during decommissioning of onsite USTs.
- Elevated methane has been identified within the northern portion of the Site during previous investigations undertaken by Coffey. Previous investigations undertaken by JK identified elevated methane within the north eastern portion of the Site that may pose a risk to future receptors. Recent investigations undertaken by Reditus identified a low risk of harm from methane within onsite building structures
    - Results of this investigation identified elevated methane within three monitoring wells (MW01, MW107, MW05) located within the northern and north eastern portion of the Site. Elevated methane with a flow rate ranging from 0.5 – 1.0L/hr was observed at MW01 and MW05 that indicates the potential for ground gases to be present that require management with a calculated site CS rating of 2.
    - Based on results of previous investigations (JK 2020) and the gas protection guidance value of 2 calculated as part of this investigation, gas protection measures may be required for future potential developments within the north eastern portion of the Site.

- Asbestos was detected in soil at several locations throughout the site during this investigation and previous investigations. Based on the nature and variable distribution of asbestos within the site is likely associated with historical filling of the Site for construction purposes. Due to the distribution of asbestos within the Site, the potential for asbestos within fill within unassessed portions of the site requires consideration. Asbestos was also detected within stockpiled material located within the central portion of the site. Where intrusive works are planned to be undertaken an Environmental Management Plan (EMP) should be prepared that outlines the require management processes to mitigate risks to human health. The stockpile located within the central portion of the Site is currently vegetated, however consideration should be given to covering the stockpile to prevent windblown emissions of dust should vegetation die or the stockpile be eroded during periods of heavy rainfall etc.
- Minor exceedances of EIL for various heavy metals, were identified soils and groundwater located throughout the Site. Based on the commercial / industrial land uses undertaken within the Site, these exceedances of EILS are unlikely to pose a risk of harm due to the lack of ecological receptors within and surrounding the Site. Previous investigations identified concentrations of heavy metals within groundwater are considered likely to be indicative of regional / background concentrations rather than onsite anthropogenic sources of heavy metals.
- Previous investigations undertaken by Reditus identified elevated concentrations OCP/OPP within the central portion of AEC-1.
    - Information presented within Figure 1 of the Reditus waste classification report identified that the distance between BH1, BH2 and BH3 was approximately 10 – 15 m indicating that the identified elevated pesticides were likely to be limited area with a maximum diameter approximately 30m in diameter.
    - Results from these investigation works returned concentrations of CoPCs (included OCP/OPP) less than LOR from location BH208 located approximately 5m north of the previous Reditus location indicting the identified pesticides are localised and unlikely to be widespread
    - ERM notes as outlined within the Reditus PSI, the area was identified to have potentially contained historical chemical storage sheds and as such, based on results collected from current and historical investigations within and surrounding AEC-1, the previously identified elevated OCP/OPP concentrations may be associated with an isolated hotspot and not indicative of significant or widespread contamination.
- ERM notes that at the time of this investigation, the onsite transformer was live / operational and located on a concrete slab. Due to the presence of live services associated with the transformer intrusive works were not possible within close proximity to the transformer. As such two surface samples were collected from material surrounding the transformer. As any contamination arising from the transformer is likely to impact surface soils, this approach was considered appropriate for screening purposes. All chemical CoPCs within samples collected from within the vicinity of the transformer were identified to be less than LOR and / or the adopted screening criteria and as such unlikely to pose a risk of harm to identified receptors.
- Elevated concentrations of PFAS was identified within collected groundwater samples from groundwater monitoring well GW228 located within the south western portion of the Site. An oil / water separator located approximately 30 m to the north east of GW228 was reported within previous investigation to have historically been utilised for the capture / discharge of waste water that may have contained PFAS. Based on the proximity of GW228 to the oil / water separator, the identified south westerly groundwater flow within this portion of the Site and results from surrounding monitoring wells returning concentrations less than adopted health based criteria, the identified PFAS within groundwater at GW228 may be attributable to the former oil / water separator and not indicative of significant or widespread PFAS contamination.

- PFAS was also detected within soil and groundwater within the south eastern portion of the Site. ERM notes that elevated PFAS (20.8 µg/L) was identified within monitoring well GW201. An additional 3 groundwater wells were installed within the vicinity of GW201 which returned concentrations ranging from GW252 (4.2 µg/L), GW253 (3.62 µg/L) and GW254 (0.9 µg/L).
    - Based on the calculated flow direction (south west), concentrations of PFAS within samples collected from additional wells installed within the vicinity of GW201 and the historical land uses undertaken within that portion of the Site (car parking), it is considered likely that the elevated PFAS within GW201 is likely to be a localised hotspot and may not be indicative of a widespread impact.
    - ERM further notes that based on concentrations of PFAS within monitoring wells GW206 and GW219 located to the south west (down gradient) of monitoring well GW201 being less than the adopted screening criteria and / or LOR, ERM considers that the identified elevated PFAS within the south eastern portion of the Site is likely to be localised and unlikely to have resulted in widespread impact to the Site..
- ERM notes that GW228 is located within close proximity to the boundary of the Site and considers there to be a potential for offsite migration of PFAS to have occurred. Consideration should be given to selective / targeted source zone removal of potential PFAS impact associated with the oil / water separator and ongoing monitoring to assess effective removal.
    - Based on the nature of the off-site receiving environment being the NSW EPA regulated Alexandra Canal, the use of the 95% criteria to assess concentrations of CoPCs in groundwater is considered appropriate to assess potential risk to identified offsite receptors.

Results of this investigation indicate that several source-pathway-receptor linkages may be present within the Site, including potential offsite migration of PFAS, asbestos in soil posing a potential risk during intrusive excavation works and methane within northern portion of the Site resulting in a potential risk to future building occupants. However, due to the commercial industrial nature of the Site and surrounding area, the environmental quality of soil and groundwater at the Site does not preclude the site for continued commercial/industrial land use subject to appropriate management of identified impacts.

10. CONCLUSION

Based on the results of this investigation, the commercial industrial uses of the Site and surrounding area, the environmental quality of soil and groundwater at the Site does not preclude the site for continued commercial/industrial land use subject to appropriate management of identified impacts.

ERM recommends the following as part of commercial/industrial use of the site:

- Consideration should be given to the potential presence of methane during any development works within the northern and north eastern portion of the Site.
- Qantas continues to implement the existing site Environment Management Plan relating to the SDC methane barrier or undertakes an assessment to establish whether requirements can be closed off;
- An Environmental Management Plan and / or Remedial Action Plan should be developed to outline the requirements for:
  - Monitoring and management of methane in parts of the Site spate from the SDC;
  - decommissioning non-operational USTs;
  - the removal and validation of the oil / water separator and potential ongoing monitoring requirements;
  - management requirements for asbestos in soil; and
  - covering / capping of stockpiled material within the central portion of the Site to mitigate potential fugitive dust emissions;
- A Construction Environmental Management Plan (CEMP) be prepared for any future construction works at the site which involve excavation below the current surface level. The CEMP would outline the required processes and procedures to be adopted to mitigate risks to human health and the environment associated with the excavation, handling and potential disposal of contaminated soil and groundwater.

11. REFERENCES

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- Environmental Resources Management Pty Ltd (ERM) Combined Preliminary Site Investigation and Detailed Site Investigation, 263 Coward Street, 7th February 2019 Ref No 0479522 (ERM 2019).
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- National Environment Protection (Assessment of Site Contamination) Measure 1999 (NEPM, 1999). As updated 2013.
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12. STATEMENT OF LIMITATIONS

1. This report is based solely on the scope of work as described within this due diligence investigation report dated 9th July 2021 and performed by ERM Environmental Resources Management Australia Pty Ltd (ERM) for Qantas Airways Limited (the Client). The Scope of Work was governed by a contract between ERM and the Client (Contract).
2. No limitation, qualification or caveat set out below is intended to derogate from the rights and obligations of ERM and the Client under the Contract.
3. The findings of this report are solely based on, and the information provided in this report is strictly limited to that required by, the Scope of Work. Except to the extent stated otherwise, in preparing this report ERM has not considered any question, nor provides any information, beyond that required by the Scope of Work.
4. This report was prepared in July 2021 based in information collected during investigations undertaken between in June 2021 and is based on conditions encountered and information reviewed at the time of preparation. The report does not, and cannot, take into account changes in law, factual circumstances, applicable regulatory instruments or any other future matter. ERM does not, and will not, provide any on-going advice on the impact of any future matters unless it has agreed with the Client to amend the Scope of Work or has entered into a new engagement to provide a further report.
5. Unless this report expressly states to the contrary, ERM's Scope of Work was limited strictly to identifying typical environmental conditions associated with the subject site(s) and does not evaluate the condition of any structure on the subject site nor any other issues. Although normal standards of professional practice have been applied, the absence of any identified hazardous or toxic materials or any identified impacted soil or groundwater on the site(s) should not be interpreted as a guarantee that such materials or impacts do not exist.
6. This report is based on one or more site inspections conducted by ERM personnel, the sampling and analyses described in the report, and information provided by the Client or third parties (including regulatory agencies). All conclusions and recommendations made in the report are the professional opinions of the ERM personnel involved. Whilst normal checking of data accuracy was undertaken, except to the extent expressly set out in this report ERM:

   a. did not, nor was able to, make further enquiries to assess the reliability of the information or independently verify information provided by;

   b. assumes no responsibility or liability for errors in data obtained from, the Client, any third parties or external sources (including regulatory agencies).
7. Although the data that has been used in compiling this report is generally based on actual circumstances, if the report refers to hypothetical examples those examples may, or may not, represent actual existing circumstances.
8. Only the environmental conditions and or potential contaminants specifically referred to in this report have been considered. To the extent permitted by law and except as is specifically stated in this report, ERM makes no warranty or representation about:

   a. the suitability of the site(s) for any purpose or the permissibility of any use;

   b. the presence, absence or otherwise of any environmental conditions or contaminants at the site(s) or elsewhere; or

   c. the presence, absence or otherwise of asbestos, asbestos containing materials or any hazardous materials on the site(s).

9. Use of the site for any purpose may require planning and other approvals and, in some cases, environmental regulator and accredited site auditor approvals. ERM offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for additional environment works.
10. The ongoing use of the site or use of the site for a different purpose may require the management of or remediation of site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report.
11. This report should be read in full and no excerpts are to be taken as representative of the whole report. To ensure its contextual integrity, the report is not to be copied, distributed or referred to in part only. No responsibility or liability is accepted by ERM for use of any part of this report in any other context.
12. Except to the extent that ERM has agreed otherwise with the Client in the Scope of Work or the Contract, this report:

    a. has been prepared and is intended only for the exclusive use of the Client;

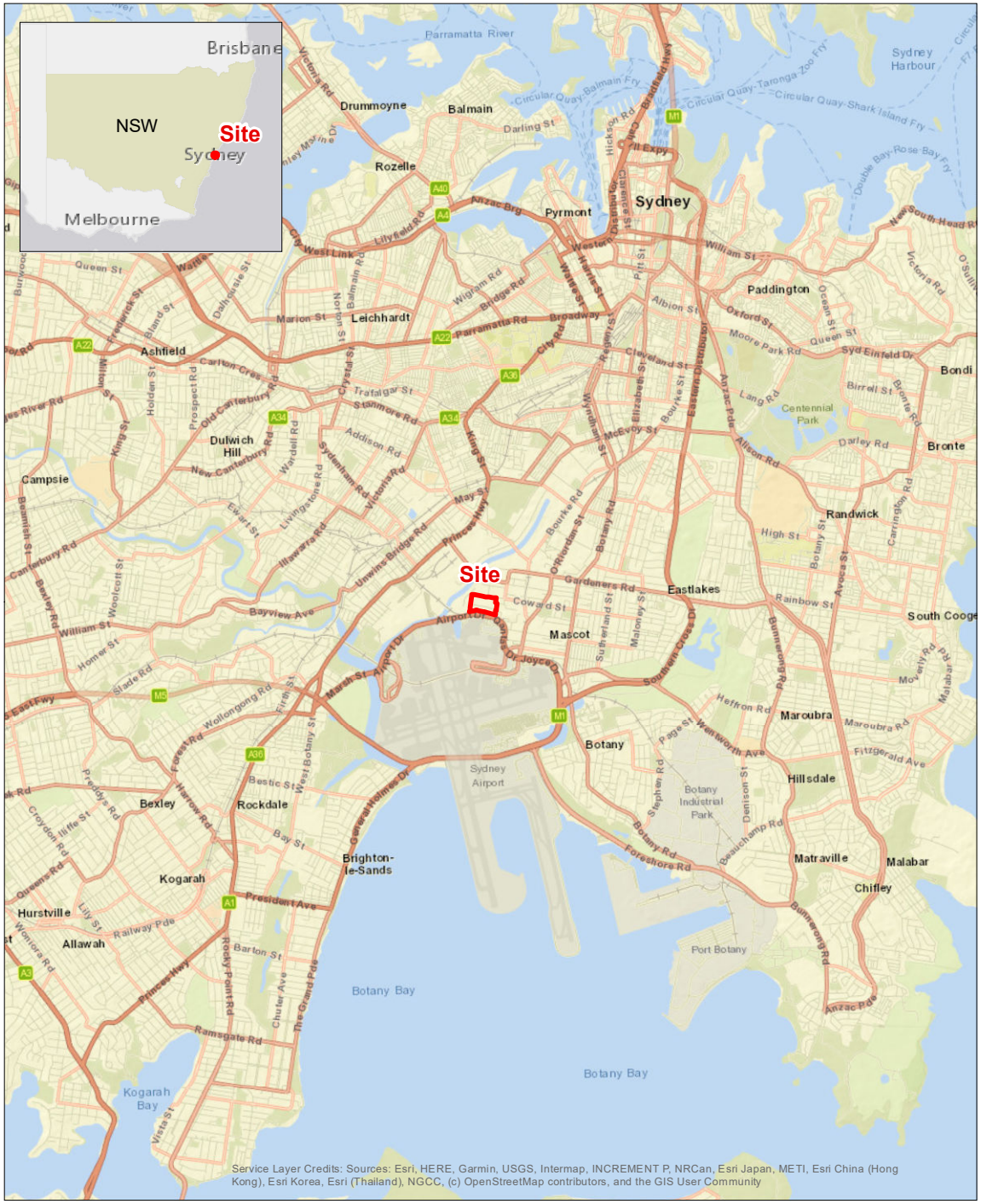
    b. must not to be relied upon or used by any other party;

    c. has not been prepared nor is intended for the purpose of advertising, sales, promoting or endorsing any Client interests including raising investment capital, recommending investment decisions, or other publicity purposes;

    d. does not purport to recommend or induce a decision to make (or not make) any purchase, disposal, investment, divestment, financial commitment or otherwise in or in relation to the site(s); and

    e. does not purport to provide, nor should be construed as, legal advice.

APPENDIX A FIGURES





Site Locality

F1

Drawing No:	0607031m_DSI_G001_R0.mxd		**COMMERCIAL IN CONFIDENCE**
Date:	08/07/2021	Drawing Size: A4	**Lot A – Coward Street and Kent Road, Mascot, NSW**
Drawn By:	VN / GR	Reviewed By: DK	Client: COMMERCIAL IN CONFIDENCE

Coordinate System: GDA 1994 MGA Zone 56

0 50 100m

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

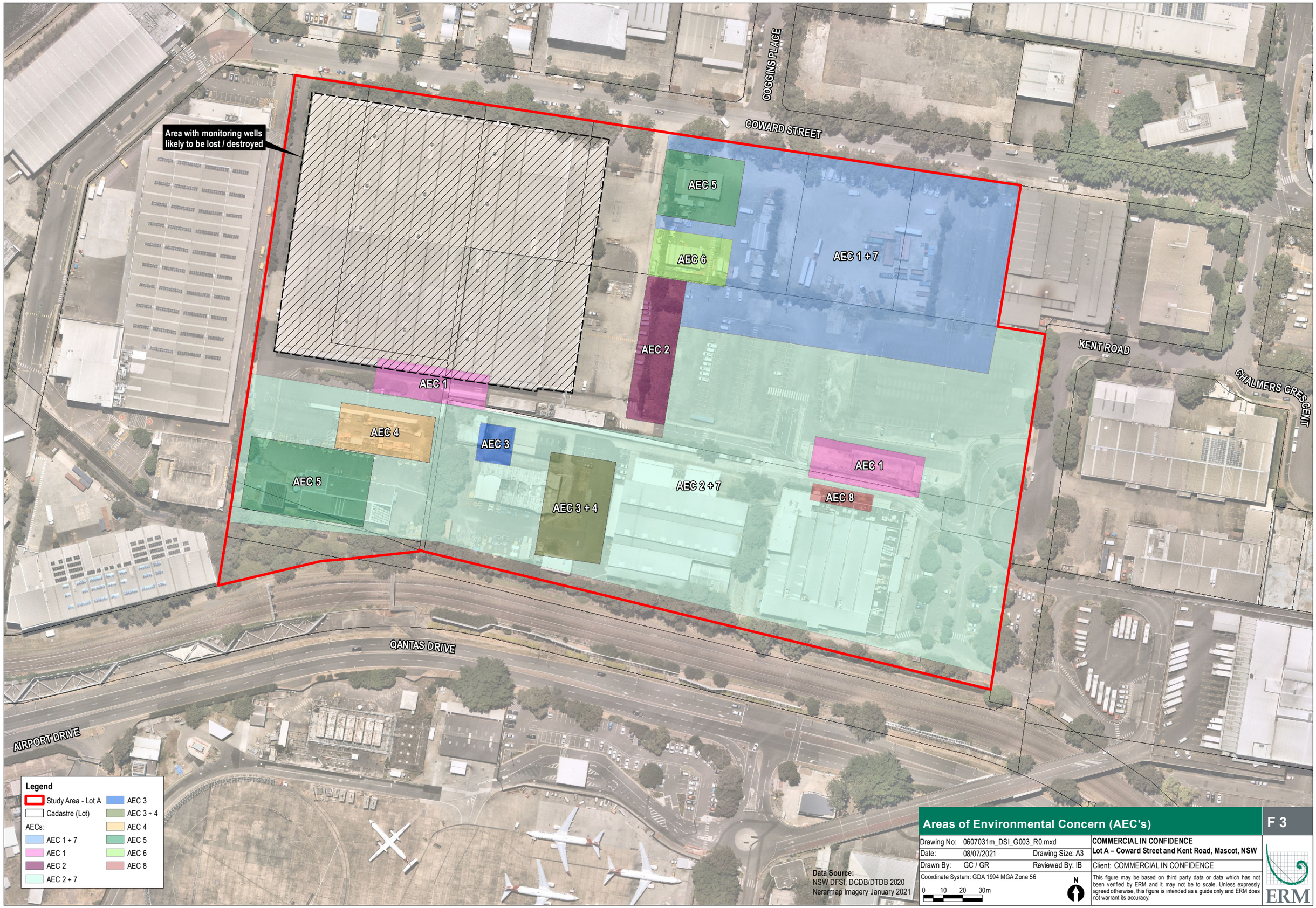


Site Layout

F 2

Drawing No:	0607031m_DSI_G002_R0.mxd		COMMERCIAL IN CONFIDENCE Lot A – Coward Street and Kent Road, Mascot, NSW
Date:	08/07/2021	Drawing Size: A3	
Drawn By:	GC / GR	Reviewed By: IB	Client: COMMERCIAL IN CONFIDENCE
Coordinate System: GDA 1994 MGA Zone 56 0 10 20 30m		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



Areas of Environmental Concern (AEC's)

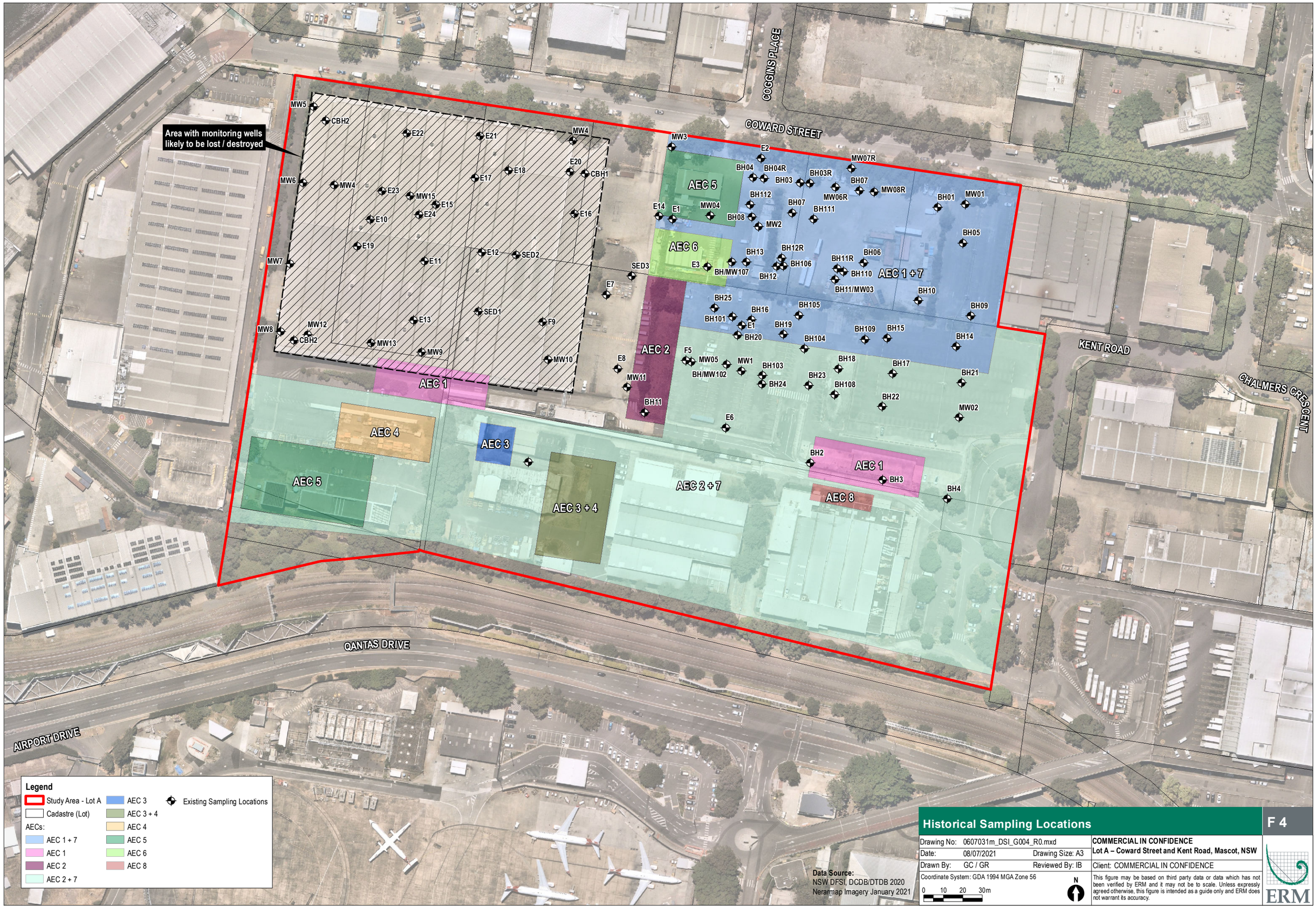
F 3

Drawing No:	0607031m_DSI_G003_R0.mxd		COMMERCIAL IN CONFIDENCE Lot A – Coward Street and Kent Road, Mascot, NSW
Date:	08/07/2021	Drawing Size: A3	
Drawn By:	GC / GR	Reviewed By: IB	Client: COMMERCIAL IN CONFIDENCE

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.

ERM



Legend

- Study Area - Lot A
- Cadastre (Lot)
- AECs:
  - AEC 1 + 7
  - AEC 1
  - AEC 2
  - AEC 2 + 7
  - AEC 3
  - AEC 3 + 4
  - AEC 4
  - AEC 5
  - AEC 6
  - AEC 8
- Existing Sampling Locations

Data Source:
NSW DFSI, DCDB/DTDB 2020
Nearmap Imagery January 2021

Historical Sampling Locations

F 4

Drawing No:	0607031m_DSI_G004_R0.mxd		
Date:	08/07/2021	Drawing Size: A3	
Drawn By:	GC / GR	Reviewed By: IB	

Coordinate System: GDA 1994 MGA Zone 56

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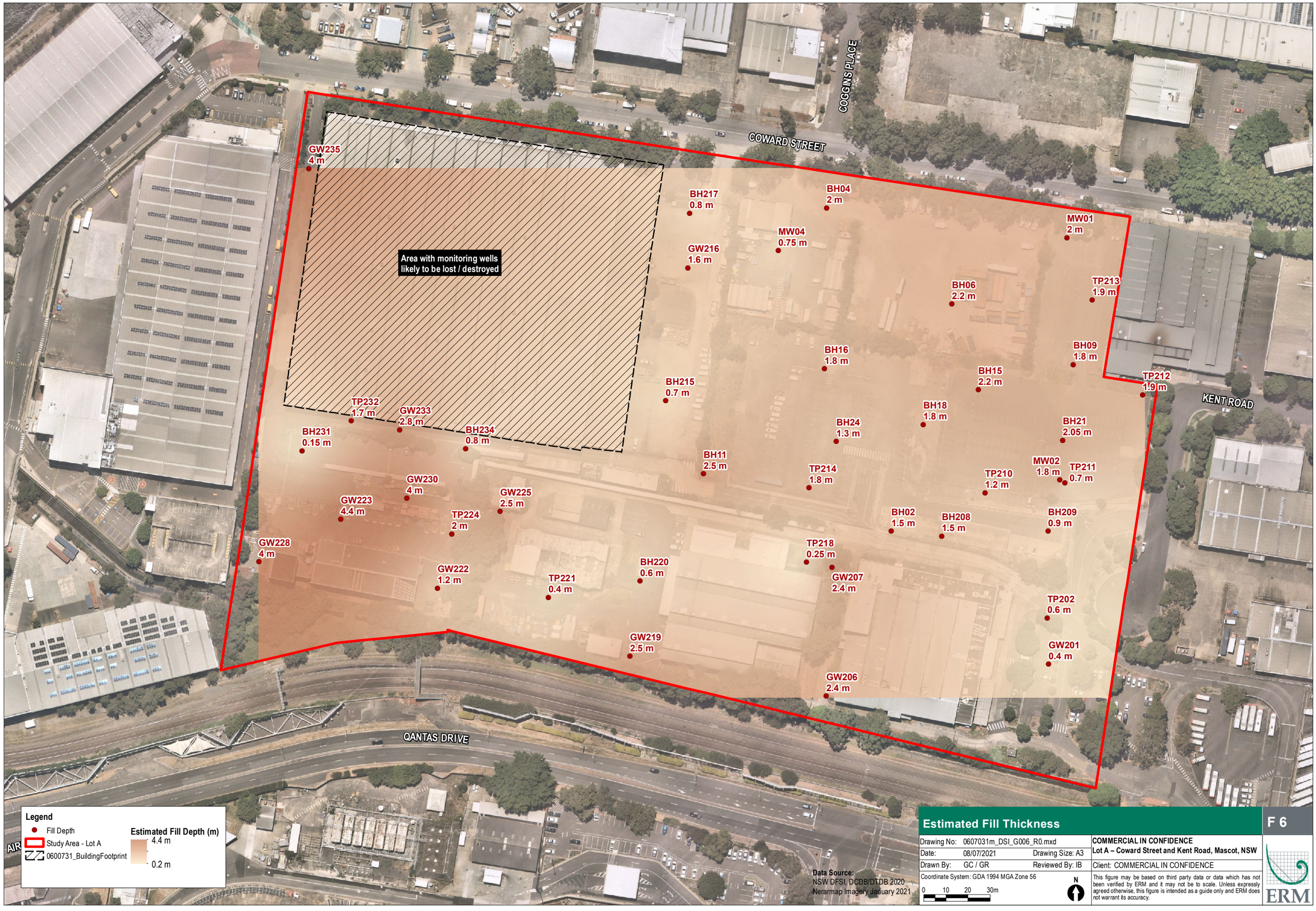
COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW

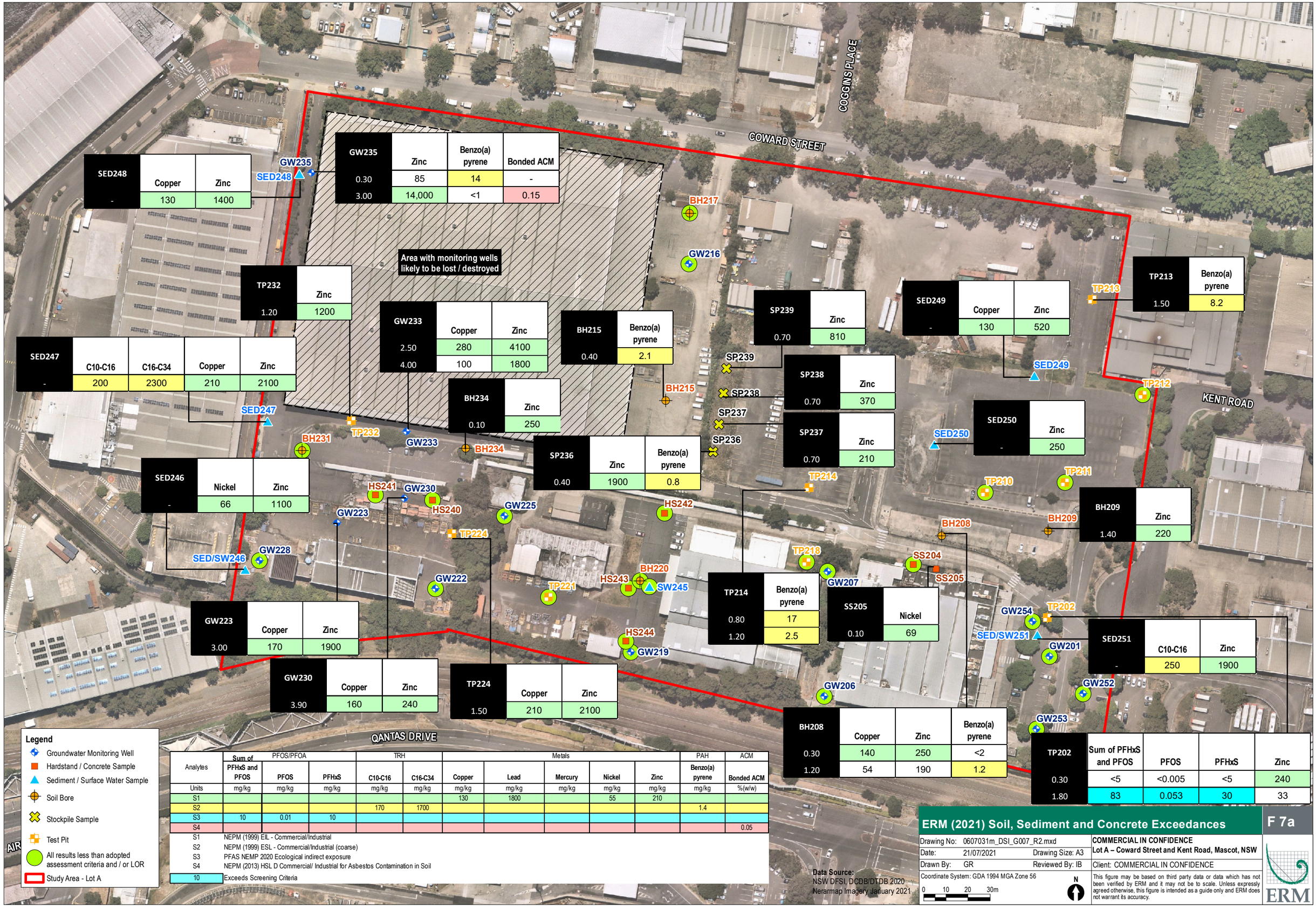
Client: COMMERCIAL IN CONFIDENCE

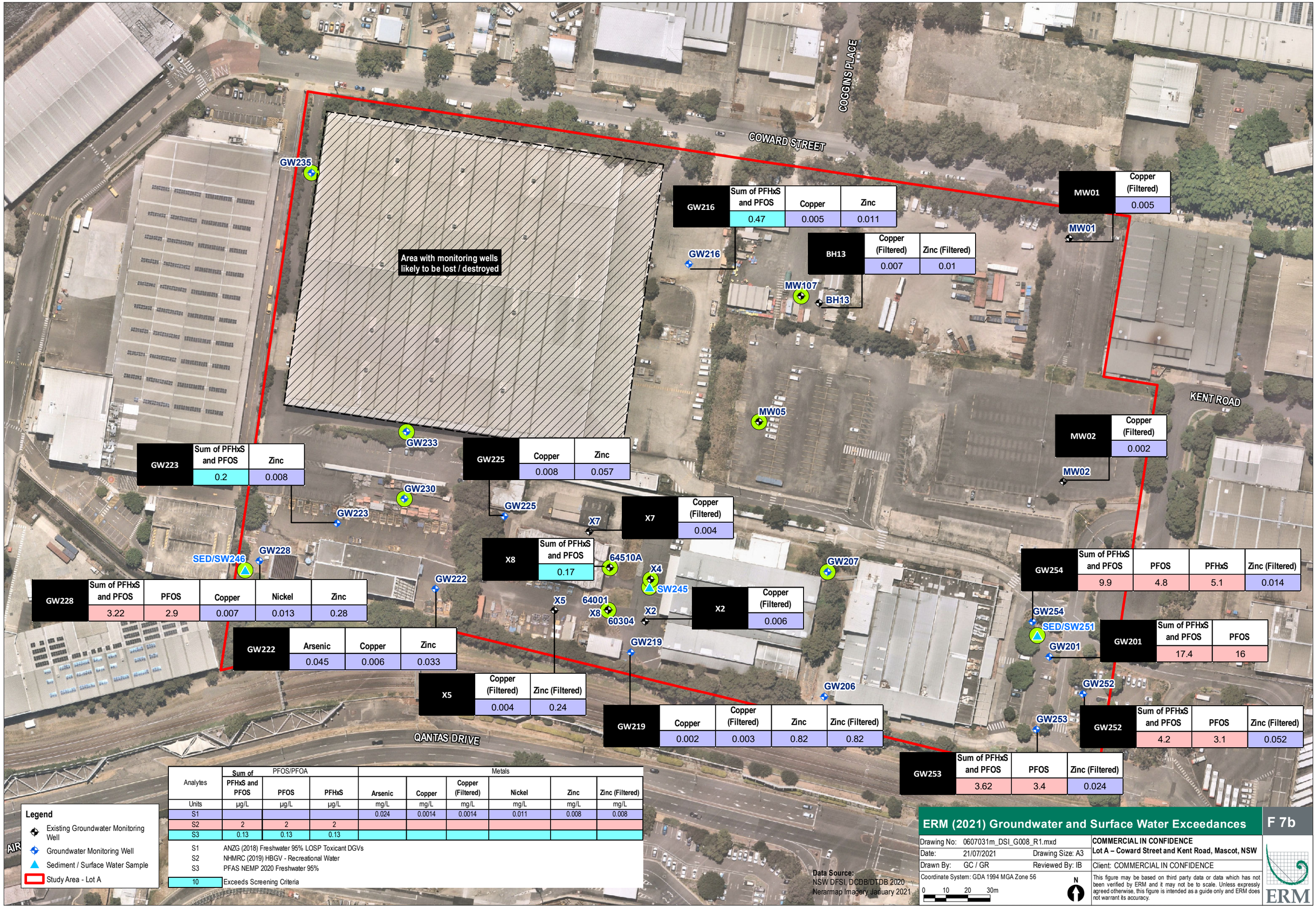
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ERM


COWARD STREET
COGGINS PLACE
KENT ROAD
QANTAS DRIVE
Area with monitoring wells likely to be lost / destroyed
GW235
SED248
BH217
GW216
MW01
MW107
BH13
TP213
SP239
SED249
BH215
SP238
TP212
SED247
SP237
MW05
TP232
BH231
GW233
BH234
SP236
SED250
TP214
TP210
MW02
TP211
HS241
GW230
HS240
GW225
HS242
GW223
X7
BH208
BH209
TP224
TP218
GW228
64510A
SS204
SED/SW246
BH220
X4
SS205
GW207
GW222
TP221
HS243
SW245
64001
X8
GW254
TP202
X5
X2
60304
SED/SW251
HS244
GW201
GW219
GW206
GW252
GW253
Legend
Existing Groundwater Monitoring Well
Groundwater Monitoring Well
Hardstand / Concrete Sample
Sediment / Surface Water Sample
Soil Bore
Stockpile Sample
Test Pit
Methane Screening Undertaken
Study Area - Lot A
Data Source:
NSW DFSI, DCDB/DTDB 2020
Nearmap Imagery January 2021
ERM (2021) Sampling Locations
F 5
Drawing No: 0607031m_DSI_G005_R1.mxd
Date: 21/07/2021
Drawing Size: A3
Drawn By: GC / GR
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 10 20 30m
N
COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW
Client: COMMERCIAL IN CONFIDENCE
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


COWARD STREET
COGGINS PLACE
KENT ROAD
QANTAS DRIVE
Area with monitoring wells likely to be lost / destroyed
GW235 4 m
BH217 0.8 m
BH04 2 m
MW01 2 m
MW04 0.75 m
GW216 1.6 m
BH06 2.2 m
TP213 1.9 m
BH16 1.8 m
BH09 1.8 m
BH15 2.2 m
TP212 1.9 m
BH215 0.7 m
BH18 1.8 m
TP232 1.7 m
GW233 2.8 m
BH231 0.15 m
BH234 0.8 m
BH24 1.3 m
BH21 2.05 m
BH11 2.5 m
TP214 1.8 m
MW02 1.8 m
TP211 0.7 m
TP210 1.2 m
GW230 4 m
GW223 4.4 m
GW225 2.5 m
TP224 2 m
BH02 1.5 m
BH208 1.5 m
BH209 0.9 m
GW228 4 m
TP218 0.25 m
BH220 0.6 m
GW222 1.2 m
TP221 0.4 m
GW207 2.4 m
TP202 0.6 m
GW219 2.5 m
GW201 0.4 m
GW206 2.4 m
Legend
Fill Depth
Study Area - Lot A
0600731_BuildingFootprint
Estimated Fill Depth (m)
4.4 m
0.2 m
Data Source:
NSW DFSI, DCDB/DTDB 2020
Nearmap Imagery January 2021
Estimated Fill Thickness
Drawing No: 0607031m_DSI_G006_R0.mxd
Date: 08/07/2021
Drawing Size: A3
Drawn By: GC / GR
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 10 20 30m
N
COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW
Client: COMMERCIAL IN CONFIDENCE
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.
F 6
ERM


COWARD STREET
COGGINS PLACE
KENT ROAD
QANTAS DRIVE
Area with monitoring wells likely to be lost / destroyed
SED248 - Copper 130 - Zinc 1400
GW235 0.30 - Zinc 85 - Benzo(a) pyrene 14 - Bonded ACM - ; 3.00 - Zinc 14,000 - Benzo(a) pyrene <1 - Bonded ACM 0.15
TP232 1.20 - Zinc 1200
SED247 - C10-C16 200 - C16-C34 2300 - Copper 210 - Zinc 2100
GW233 2.50 - Copper 280 - Zinc 4100 ; 4.00 - Copper 100 - Zinc 1800
BH215 0.40 - Benzo(a) pyrene 2.1
BH234 0.10 - Zinc 250
SP236 0.40 - Zinc 1900 - Benzo(a) pyrene 0.8
SP239 0.70 - Zinc 810
SP238 0.70 - Zinc 370
SP237 0.70 - Zinc 210
SED249 - Copper 130 - Zinc 520
TP213 1.50 - Benzo(a) pyrene 8.2
SED250 - Zinc 250
SED246 - Nickel 66 - Zinc 1100
GW223 3.00 - Copper 170 - Zinc 1900
GW230 3.90 - Copper 160 - Zinc 240
TP224 1.50 - Copper 210 - Zinc 2100
TP214 0.80 - Benzo(a) pyrene 17 ; 1.20 - Benzo(a) pyrene 2.5
SS205 0.10 - Nickel 69
BH208 0.30 - Copper 140 - Zinc 250 - Benzo(a) pyrene <2 ; 1.20 - Copper 54 - Zinc 190 - Benzo(a) pyrene 1.2
BH209 1.40 - Zinc 220
SED251 - C10-C16 250 - Zinc 1900
TP202 0.30 - Sum of PFHxS and PFOS <5 - PFOS <0.005 - PFHxS <5 - Zinc 240 ; 1.80 - Sum of PFHxS and PFOS 83 - PFOS 0.053 - PFHxS 30 - Zinc 33
BH217
GW216
BH231
GW228
SED/SW246
GW222
GW225
HS241
GW230
HS240
GW223
TP224
HS242
BH220
HS243
SW245
TP221
HS244
GW219
TP214
TP218
GW207
BH208
SS204
SS205
TP210
TP211
BH209
GW254
TP202
SED/SW251
GW201
GW252
GW206
GW253
TP212
TP213
SED250
SED249
SP239
SP238
SP237
SP236
BH215
TP232
GW233
BH234
SED247
SED246
TP232
TP224
GW223
GW230
SED248
GW235
Legend
Groundwater Monitoring Well
Hardstand / Concrete Sample
Sediment / Surface Water Sample
Soil Bore
Stockpile Sample
Test Pit
All results less than adopted assessment criteria and / or LOR
Study Area - Lot A
Analytes | Sum of PFHxS and PFOS (PFOS/PFOA) | PFOS (PFOS/PFOA) | PFHxS (PFOS/PFOA) | C10-C16 (TRH) | C16-C34 (TRH) | Copper (Metals) | Lead (Metals) | Mercury (Metals) | Nickel (Metals) | Zinc (Metals) | Benzo(a) pyrene (PAH) | Bonded ACM (ACM)
Units | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | %(w/w)
S1 | | | | | | 130 | 1800 | | 55 | 210 | | |
S2 | | | | 170 | 1700 | | | | | | 1.4 | |
S3 | 10 | 0.01 | 10 | | | | | | | | | |
S4 | | | | | | | | | | | | 0.05
S1 NEPM (1999) EIL - Commercial/Industrial
S2 NEPM (1999) ESL - Commercial/Industrial (coarse)
S3 PFAS NEMP 2020 Ecological indirect exposure
S4 NEPM (2013) HSL D Commercial/ Industrial for Asbestos Contamination in Soil
10 Exceeds Screening Criteria
Data Source:
NSW DFSI, DCDB/DTDB 2020
Nerarmap Imagery January 2021
ERM (2021) Soil, Sediment and Concrete Exceedances
F 7a
Drawing No: 0607031m_DSI_G007_R2.mxd
Date: 21/07/2021
Drawing Size: A3
Drawn By: GR
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 10 20 30m
N
COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW
Client: COMMERCIAL IN CONFIDENCE
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



GW223	Sum of PFHxS and PFOS	Zinc
	0.2	0.008

GW225	Copper	Zinc
	0.008	0.057

X7	Copper (Filtered)
	0.004

X8	Sum of PFHxS and PFOS
	0.17

GW228	Sum of PFHxS and PFOS	PFOS	Copper	Nickel	Zinc
	3.22	2.9	0.007	0.013	0.28

GW222	Arsenic	Copper	Zinc
	0.045	0.006	0.033

X5	Copper (Filtered)	Zinc (Filtered)
	0.004	0.24

X2	Copper (Filtered)
	0.006

GW219	Copper	Copper (Filtered)	Zinc	Zinc (Filtered)
	0.002	0.003	0.82	0.82

GW216	Sum of PFHxS and PFOS	Copper	Zinc
	0.47	0.005	0.011

BH13	Copper (Filtered)	Zinc (Filtered)
	0.007	0.01

MW01	Copper (Filtered)
	0.005

MW02	Copper (Filtered)
	0.002

GW254	Sum of PFHxS and PFOS	PFOS	PFHxS	Zinc (Filtered)
	9.9	4.8	5.1	0.014

GW201	Sum of PFHxS and PFOS	PFOS
	17.4	16

GW252	Sum of PFHxS and PFOS	PFOS	Zinc (Filtered)
	4.2	3.1	0.052

GW253	Sum of PFHxS and PFOS	PFOS	Zinc (Filtered)
	3.62	3.4	0.024

Analytes	Sum of PFHxS and PFOS	PFOS	PFHxS	Arsenic	Copper	Copper (Filtered)	Nickel	Zinc	Zinc (Filtered)
Units	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
S1				0.024	0.0014	0.0014	0.011	0.008	0.008
S2	2	2	2						
S3	0.13	0.13	0.13						

PFOS/PFOA | Metals

S1 ANZG (2018) Freshwater 95% LOSP Toxicant DGVs
S2 NHMRC (2019) HBGV - Recreational Water
S3 PFAS NEMP 2020 Freshwater 95%

10 Exceeds Screening Criteria

Legend

- Existing Groundwater Monitoring Well
- Groundwater Monitoring Well
- Sediment / Surface Water Sample
- Study Area - Lot A

Data Source:
NSW DFSI, DCDB/DTDB 2020
Nerarmap Imagery January 2021

ERM (2021) Groundwater and Surface Water Exceedances

F 7b

Drawing No: 0607031m_DSI_G008_R1.mxd
Date: 21/07/2021 Drawing Size: A3
Drawn By: GC / GR Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 10 20 30m
N

COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW
Client: COMMERCIAL IN CONFIDENCE

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


COWARD STREET
COGGINS PLACE
KENT ROAD
QANTAS DRIVE
Area with monitoring wells likely to be lost / destroyed
GW235
GW216
MW107
(51.0)
MW01
(4.4)
MW05
(9.2)
GW233
GW230
GW223
GW225
GW228
GW222
X8
GW219
GW207
MW02
GW201
Legend
Study Area - Lot A
Existing Groundwater Monitoring Well
Groundwater Monitoring Well
Methane Screening Undertaken
Methane Screening Undertaken - Elevated Concentration Recorded
(2.4) Methane Concentration (%V)
Data Source:
NSW DFSI, DCDB/DTDB 2020
Nearmap Imagery January 2021
Methane Screening –
Location of Elevated Methane Concentration's
Drawing No: 0607031m_DSI_G009_R0.mxd
Date: 21/07/2021
Drawing Size: A3
Drawn By: GC / GR
Reviewed By: IB
Coordinate System: GDA 1994 MGA Zone 56
0 10 20 30m
N
COMMERCIAL IN CONFIDENCE
Lot A – Coward Street and Kent Road, Mascot, NSW
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F 7c
ERM

COWARD STREET

COGGINS PLACE

KENT ROAD

QANTAS DRIVE

Area with monitoring wells likely to be lost / destroyed

GW235 (0.60)

GW216 (1.07)

BH13 (1.14)

MW01 (1.40)

MW05 (1.12)

MW02 (1.43)

GW233 (0.64)

GW230 (0.68)

GW223 (0.59)

GW225 (0.78)

X7 (0.91)

GW228 (0.58)

GW222 (0.66)

X4 (0.87)

X5 (0.75)

X8 (1.20)

X2 (0.78)

GW219 (0.69)

GW207 (1.12)

GW201 (1.35)

GW206 (0.88)

0.8 m

0.6 m

1.0 m

1.4 m

1.2 m

1.0 m

Legend

- Study Area - Lot A
- Existing Groundwater Monitoring Well
- Groundwater Monitoring Well
- Inferred Groundwater Elevation (mAHD)
- Inferred Groundwater Flow Direction
- (0.54) Corrected Groundwater Elevation (m AHD)

Data Source:
NSW DFSI, DCDB/DTDB 2020
Nerarmap Imagery January 2021

Groundwater Flow Direction

F 7d

Drawing No:	0607031m_DSI_G010_R0.mxd		COMMERCIAL IN CONFIDENCE Lot A – Coward Street and Kent Road, Mascot, NSW
Date:	21/07/2021	Drawing Size: A3	
Drawn By:	GC / GR	Reviewed By: IB	Client: COMMERCIAL IN CONFIDENCE

Coordinate System: GDA 1994 MGA Zone 56

0 10 20 30m

N

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APPENDIX B TABLES

Well ID	Gauging Date	Location	Depth to LNAPL (m btoc)	Depth to Water (m btoc)	LNAPL Thickness (m)	Total Depth (m btoc)	Top of Casing (AHD)	Depth to Water (AHD)	Comments
MW01	22/Jun/21	AEC-3	-	1.74	-	4.030	3.135	1.395	Swollen bentonite filling gatic
MW02	22/Jun/21	Car Park (east)	-	1.665	-	4.150	3.098	1.433	Swollen bentonite filling gatic
MW05	22/Jun/21	Car Park (west)	-	1.44	-	4.090	2.557	1.117	Swollen bentonite filling gatic
BH13	22/Jun/21	AEC-3 (Suez Area)	-	1.78	-	2.010	2.919	1.139	Purged dry. Minimal water present
X1	22/Jun/21	AEC-3+4		2.27	-	BLOCKED	--	--	Blocked at 2.29m bgl on roots
X2	22/Jun/21	AEC-3+4	-	2.285	-	4.100	3.062	0.777	
X3	22/Jun/21	AEC-3+4		1.91	-	BLOCKED	--	--	Blocked at 1.92 m bgl on roots
X4	22/Jun/21	AEC-3+4	-	2.21	-	4.050	3.075	0.865	
X5	22/Jun/21	AEC-3+4	-	1.925	-	3.650	2.679	0.754	
X6	22/Jun/21	AEC-3+4	-	1.92	-	BLOCKED	--	--	Blocked at 1.96 m bgl on roots
X7	22/Jun/21	AEC-3+4	-	1.67	-	4.170	2.579	0.909	
X8	22/Jun/21	AEC-3+4	-	1.52	-	4.290	2.723	1.203	
GW201	5/Jul/21	South-eastern Car Park	-	1.739	-	2.78	3.089	1.35	Bottom depth decreased from 3.8m bgl - 2.78m bgl due to silting of well.
GW201	15/Jul/21	South-eastern Car Park	-	1.74	-	2.78	3.089	1.349	
GW206	6/Jul/21	South egde (eastern)	-	1.989	-	3.740	2.867	0.878	
GW207	6/Jul/21	South-east	-	2.419	-	3.944	3.541	1.122	
GW216	5/Jul/21	Driveway West of AEC-5	-	1.523	-	4.151	2.592	1.069	
GW219	5/Jul/21	AEC-3+4	-	2.29	-	3.475	2.976	0.686	
GW222	5/Jul/21	South edge (mid west)	-	1.869	-	3.814	2.533	0.664	
GW223	5/Jul/21	AEC-5	-	2.151	-	4.396	2.744	0.593	
GW225	5/Jul/21	AEC-3	-	1.734	-	3.877	2.51	0.776	
GW228	5/Jul/21	AEC-5	-	1.795	-	3.852	2.372	0.577	
GW230	5/Jul/21	AEC-4	-	1.74	-	4.057	2.419	0.679	
GW233	5/Jul/21	AEC-1	-	2.201	-	4.019	2.841	0.64	
GW235	5/Jul/21	North West Corner	-	1.4	-	3.561	1.996	0.596	
GW252	15/Jul/21	South-eastern Car Park	-	2.006	-	3.335	3.361	1.355	PFAS delineation well
GW253	15/Jul/21	South-eastern Car Park	-	1.994	-	3.782	3.187	1.193	PFAS delineation well
GW254	15/Jul/21	South-eastern Car Park	-	1.653	-	3.110	3.029	1.376	PFAS delineation well

Notes:

mbTOC metres below top of casing
m metres
AHD Australian Height Datum

Well ID	Date	Sampling Method	pH	TEMP (°C)	EC (µScm-¹)	DO (mg/L)	Eh (mV)	Comments
MW01	22/Jun/21	Peristaltic Pump	6.26	19.8	593	-	-88	Clear, very slightly yellow, H2S odour
MW02	22/Jun/21	Peristaltic Pump	5.92	23.6	334	-	-71	Very slightly cloudy yellow/ brown, H2S odour
MW05	22/Jun/21	Peristaltic Pump	5.94	22.9	406	0.01	-165	Clear, organic/ H2S odour
BH13	22/Jun/21	Peristaltic Pump	6.67	20.2	1441	0.50	-114	Clear, slight yellow, 'burnt' hydrocarbon/ PAH odour
X1	22/Jun/21	Peristaltic Pump	-	-	-	-	-	Blocked at 2.29m bgl on roots
X2	22/Jun/21	Peristaltic Pump	5.82	22.6	532	-	-22	Cloudy brown, no odour
X3	22/Jun/21	Peristaltic Pump	-	-	-	-	-	Blocked at 1.92 m bgl on roots
X4	22/Jun/21	Peristaltic Pump	5.90	22.2	478	0.02	-2	Light brown, cloudy, no odour
X5	22/Jun/21	Peristaltic Pump	6.32	22.2	547	0.05	-71	Very slightly cloudy and brown, slight organic odour
X6	22/Jun/21	Peristaltic Pump	-	-	-	-	-	Blocked at 1.96 m bgl on roots
X7	22/Jun/21	Peristaltic Pump	6.65	20.7	478	-	-99	Cloudy dark brown, no odour
X8	22/Jun/21	Peristaltic Pump	5.94	21.3	218	-	-76	Slightly cloudy brown, organic odour
GW201	5/Jul/21	Peristaltic Pump	6.30	19.5	419	0.01	-53	Brown, mildly turbid, no odour
GW201	15/Jul/21	Peristaltic Pump	6.02	19.0	314	0.11	-160	Lightbrown, mild turbidity, minor organic odour
GW206	6/Jul/21	Peristaltic Pump	6.13	18.9	439	0.06	-13	Clear, no odour
GW207	6/Jul/21	Peristaltic Pump	6.42	19.3	734	0.03	-80	Clear, no odour
GW216	5/Jul/21	Peristaltic Pump	8.56	21.3	878	-	-279	Light brown, mildly turbid, no odour
GW219	5/Jul/21	Peristaltic Pump	5.76	21.3	361	1.02	109	Clear, no odour
GW222	5/Jul/21	Peristaltic Pump	6.71	20.1	1062	0.05	-41	Clear, no odour
GW223	5/Jul/21	Peristaltic Pump	6.98	22.7	6480	0	-275	Clear, no odour
GW225	5/Jul/21	Peristaltic Pump	6.60	18.9	1009	0.07	-85	Turbid light brown, no odour
GW228	5/Jul/21	Peristaltic Pump	6.91	19.6	3428	-	-111	Clear, no odour
GW230	5/Jul/21	Peristaltic Pump	7.01	20.3	1501	-	-84	Clear, no odour
GW233	5/Jul/21	Peristaltic Pump	7.35	19.1	1297	0.01	-89	Clear, no odour
GW235	5/Jul/21	Peristaltic Pump	8.15	19.6	2110	0	-237	Clear, no odour
GW252	15/Jul/21	Peristaltic Pump	5.48	19.5	456	0.53	-77	Dark brown, turbid, odourless
GW253	15/Jul/21	Peristaltic Pump	5.77	20.4	308	0.16	-112	Brown, slightly turbid, odourless
GW254	15/Jul/21	Peristaltic Pump	6.24	19.8	350	0.33	-162	Light brown, clear, odourless

Notes:

MW	Monitoring Well
SW	Surface Water
Pre	Pre Purging
Post	Post Purging
DO	Dissolved Oxygen
mg/L	milligrams per litre
EC	Electrical Conductivity
µScm^{-1}	microsiemens per centimetre
Eh	Redox
mV	millivolts
TDS	Total Dissolved Solids
L	Litres

Equipment: YSI - 12D100011 & 13D1000015
IP - Solinst (ERM Newcastle IP #3)

Operator: Michael Mercer and Jack Emblen

| | TRH | | | | TPH | | | | BTEX | | | | Chlorinated Hydrocarbons | | | |

| | Phenols | | | | | | | | | | | | | | | | | | | | | Metals | | | | | | | | | | | | | | | | | | |

| | | |

	Phthalates						Explosives			Solvents					SVOCs							VOCs										Amino Aliphatic		Amino Aromatics			Anilines	
	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	2,4-Dinitrotoluene	2,6-dinitrotoluene	Nitrobenzene	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Alkyl 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	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz[a,j]acridine	Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	Pentachloroethane	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	2-nitroaniline	Aniline
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	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	0.5	0.5	0.5	0.5	0.5	0.5	0.5			0.5	0.5	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
NEPM (1999) EIL - Commercial/Industrial																																							
NEPM (1999) ESL - Commercial/Industrial (coarse)																																							
NEPM (1999) ESL - Commercial/Industrial (fine)																																							
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil																																							
NEPM 2013 HSL D for VI - Clay Soils_ 0-1m																																							
NEPM 2013 HSL D for VI - Clay Soils 1-2m																																							
NEPM 2013 HSL D for VI - Clay Soils 2-4m																																							
NEPM 2013 HSL D for VI - Clay Soils >4m																																							
NEPM 2013 HSL D for VI - Sand Soils_ 0-1m																																							
NEPM 2013 HSL D for VI - Sand Soils 1-2m																																							
NEPM 2013 HSL D for VI - Sand Soils 2-4m																																							
NEPM 2013 HSL D for VI - Sand Soils >4m																																							
NEPM 2013 Management Limits Comm / Ind - Fine Soils																																							
NEPM 2013 Management Limits Comm / Ind - Coarse Soils																																							
PFAS NEMP 2020 Ecological direct exposure																																							
PFAS NEMP 2020 Ecological indirect exposure																																							
PFAS NEMP 2020 Industrial/ commercial (HIL D)																																							
PFAS NEMP 2020 Public open space (HIL C) (Sediment Samples Only)																																							
PFAS NEMP 2020 Residential with garden/accessible soil (HIL A) (Sediment Samples Only)																																							
PFAS NEMP 2020 Residential with minimal opportunities for soil access (HIL B) (Sediment Samples Only)																																							

| Field_ID | LocCode | SampleCode | Sampled_Date-Time | Lab_Report_Number | Location Type | | | | | | | | | | | | | | | | | | |

				Identification of Asbestos		ACM in Soil		Sample Description
				Asbestos Detected (Yes/No)	Asbestos Type	Bonded ACM	Friable Asbestos (as Asbestos in Soil)	
				Yes/ No	-	%(w/w)	%(w/w)	
EQL				-	-			
NEPM (2013) HSL D Commercial/ Industrial for Asbestos Contamination in Soil						0.05	0.001	
LocCode	**Field_ID**	**Sampled_Date**	**Lab_Report_Number**					
BH208	BH208_0.3	5/07/2021	808027	Yes	Chrysotile and Amosite		0.0082	Brown coarse-grained sandy soil, ash, bitumen and rocks
BH208	BH208_1.2	5/07/2021	808027	No	-	-	-	Brown- black coarse-grained sandy soil, ash, bitumen, glass fragmets and rocks
BH209	BH209_0.2	5/07/2021	808027	No	-	-	-	Brown- black coarse-grained sandy soil, ash, bitumen and rocks
BH209	BH209_1.4	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil and rock
BH215	BH215_0.4	5/07/2021	808299	No	-	-	-	Brown coarse-grained soil, brick, glass, cement, bitumen and rocks
BH217	BH217_0.4	5/07/2021	808299	No	-	-	-	Brown coarse-grained soil, bitumen, brick and rocks
BH220	BH220_0.4	1/07/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, sand stone and rocks
BH231	BH231_0.1	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil and rocks
BH234	BH234_0.1	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil, organic debris, bitumen, cement and rocks
BH234	BH234_0.4	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil, cement, bitumen, organic debris and rocks
GW230	DUP04_210628	28/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW225	DUP05_210630	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
BH215	DUP06_210701	5/07/2021	808299	No	-	-	-	Brown coarse-grained sandy soil, bitumen and rocks
BH209	DUP08_210702	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil and rocks
BH252	BH252-0.5	13/07/2021	810797	No	-	-	-	Brown coarse-grained sandy soil and rocks
BH252	BH252-2.0	13/07/2021	810797	No	-	-	-	Brown fine-grained sandy soil
BH252	20210713-D01	13/07/2021	810797	No	-	-	-	Brown coarse-grained sandy soil, organic debris and rocks
BH253	BH253-0.5	13/07/2021	810797	No	-	-	-	Brown fine-grained sandy soil and rocks
BH253	BH253-2.0	13/07/2021	810797	No	-	-	-	Brown fine-grained sandy soil, sand stone, organic debris, bitumen and rocks
BH254	BH254-0.5	13/07/2021	810797	No	-	-	-	Brown fine-grained sandy soil
BH254	BH254-2.0	13/07/2021	810797	No	-	-	-	Brown fine-grained sandy soil
GW201	GW201_1.5	5/07/2021	808299	No	-	-	-	Brown coarse-grained sandy soil and rocks
GW201	GW201_3.0	5/07/2021	808299	No	-	-	-	Brown coarse-grained sandy soil and rocks
GW206	GW206_2.5	29/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW206	GW206_4.0	29/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW207	GW207_0.6	28/06/2021	807316	Yes	Chrysotile, amosite and crocidolite		0.024	Brown coarse-grained sandy soil, cement, plaster material, sand stone, bitumen, coal, organic debris and rocks
GW207	GW207_3.0	29/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW216	GW216_1.0	28/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil and rocks
GW216	GW216_3.0	28/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW219	GW219_2.5	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW219	GW219_4.0	30/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil and rocks
GW222	GW222_2.0	30/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, shell fragments and rocks
GW222	GW222_4.0	30/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil and rocks
GW223	GW223_0.2	30/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, sand stone and rocks
GW223	GW223_3.0	30/06/2021	807316	Yes	Chrysotile		0.029	Brown coarse-grained sandy soil, corroded metal, bitumen and rocks
GW225	GW225_0.5	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and ash like material
GW225	GW225_3.0	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW228	GW228_3.0	1/07/2021	807316	No	-	-	-	Brown fine-grained sandy soil, organic debris and rocks
GW228	GW228_4.0	1/07/2021	807316	No	-	-	-	Brown fine-grained sandy soil, shell fragments and rocks
GW230	GW230_0.6	28/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil and rocks
GW230	GW230_3.9	28/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, plaster like material, glass fragments, coal, shell fragments and rocks
GW233	GW233_2.5	29/06/2021	807316	Yes	Chrysotile		0.034	Brown gss, bitumen, cement, organic debris and rocks
GW233	GW233_4.0	29/06/2021	807316	Yes	Chrysotile		0.0033	Brown coarse-grained sandy soil and rocks
GW235	GW235_0.3	29/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, bitumen and rocks
GW235	GW235_3.0	29/06/2021	807316	Yes	Chrysotile, amosite and crocidolite	0.15	-	Brown coarse-grained sandy soil and rocks
SED246	SED246	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil, organic debris and rocks
SED247	SED247	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil, cement, organic debris, wood chips and rocks
SED248	SED248	5/07/2021	808027	No	-	-	-	Black coarse-grained sandy soil, organic debris and rocks
SED249	SED249	5/07/2021	808027	Yes	Amosite		0.000018	Brown coarse-grained sandy soil, organic debris and rocks
SED251	SED251	5/07/2021	808027	No	-	-	-	Brown coarse-grained sandy soil, organic debris and rocks
SP236	SP236_0.4	22/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, glass, corroded metal, bitumen and rocks
SP237	SP237_0.7	22/06/2021	806169	Yes	Chrysotile		0.00034	Brown coarse-grained sandy soil, glass, cement and rocks
SP237	SP237_ACM	22/06/2021	806169	Yes	Chrysotile and Amosite	-	-	Grey fibre cement material
SP238	SP238_0.7	22/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, cement, glass and rocks
SP239	SP239_0.7	22/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, cement, glass and rocks
SW_FRAG	SW_FRAG	5/07/2021	808027	Yes	Chrysotile and Amosite	-	-	Off- white layered fibre cement material

				Identification of Asbestos		ACM in Soil		Sample Description
				Asbestos Detected (Yes/No)	Asbestos Type	Bonded ACM	Friable Asbestos (as Asbestos in Soil)	
				Yes/ No	-	%(w/w)	%(w/w)	
EQL				-	-			
NEPM (2013) HSL D Commercial/ Industrial for Asbestos Contamination in Soil						0.05	0.001	
LocCode	**Field_ID**	**Sampled_Date**	**Lab_Report_Number**					
TP202	TP202_0.3	28/06/2021	807316	Yes	Chrysotile		0.000097	Brown coarse-grained sandy soil, cement, plaster material, wood chips, bitumen, organic debris and rocks
TP202	TP202_0.8	28/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, bitumen, coal, cement, plaster material, organic debris and rocks
TP202	TP202_1.2	28/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, bitumen, coal, plaster, wood chips, organic debris and rocks
TP202	TP202_1.8	28/06/2021	807316	No	-	-	-	Brown coarse-grained sandy soil, cement, plaster, organic debris and rocks
TP210	TP210_1.4	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, glass, coal and rocks
TP210	TP210_1.8	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, glass, brick and rocks
TP211	TP211_0.5	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, cement and rocks
TP211	TP211_1.0	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, cement, corroded metal and rocks
TP212	TP212_0.7	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil and rocks
TP212	TP212_1.8	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil and rocks
TP213	TP213_0.6	23/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, bitumen and rocks
TP213	TP213_1.5	23/06/2021	806169	No	-	-	-	Brown fine-grained clayey soil and rocks
TP214	TP214_0.8	22/06/2021	806169	No	-	-	-	Brown fine-grained clayey soil and rocks
TP214	TP214_1.2	22/06/2021	806169	Yes	Chrysotile and Amosite	0.017	-	Brown coarse-grained sandy soil, compressed fibrous material and rocks.
TP214	TP214_ACM	22/06/2021	806169	Yes	Chrysotile, amosite and crocidolite asbestos	-	-	Grey compressed fibre cement
TP218	TP218_0.4	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil, ash, organic debris, bitumen and rocks
TP218	TP218_1.2	30/06/2021	807316	No	-	-	-	Brown fine-grained sandy soil, bitumen, ash, glass fragments, organic debris and rocks
TP221	TP221_0.2	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil and rocks
TP221	TP221_1.0	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, bitumen and rocks
TP224	TP224_0.5	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, bitumen and rocks
TP224	TP224_1.5	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, corroded metal and rocks
TP232	TP232_0.5	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, cement, bitumen, brick and rocks
TP232	TP232_1.2	24/06/2021	806169	No	-	-	-	Brown coarse-grained sandy soil, glass, corroded metal and rocks

				TRH							TPH						BTEX							Amino Aliphatic		Amino Aromatics			Halogenated Benzenes														Halogenated Hydrocarbons				
				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)	Total BTEX	Xylene Total	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	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
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL				20	20	50	50	100	100	100	20	50	100	50	50	1	1	1	2	1		2	5	5	5	5	5	0.005	0.005	5	5	5	1	5	1	1	1	1	1	5	5	1	1	1	1	1
ADWG 2019 Aesthetic																	25	3				20											1		20	0.3			10							
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs																950	180	80		350								0.004	0.005	10	7	170	160	13	260	60			55	0.1	2					
NEPM 2013 HSL D GW for VI - 2-4m					6000		NL									5000	NL	NL				NL																								
NEPM 2013 HSL C GW for VI - 2-4m					NL		NL									NL	NL	NL				NL																								
NEPM 2013 Table 1C GILs, Fresh Waters																950				350										3		85	160		260	60										
NHMRC (2019) HBGV - Recreational Water																																														
PFAS NEMP 2020 Freshwater 95%																																														
PFAS NEMP 2020 Freshwater 99%																																														
Field_ID	**LocCode**	**Sampled_Date-Time**	**Lab_Report_Number**																																											
BH13	BH13	24/06/2021	806169	<20	<20	**310**	**260**	**900**	<100	**1210**	<20	<50	**1100**	<100	**1100**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW201	GW201	5/07/2021	808570	<20	<20	<50	<50	**200**	<100	**200**	<20	<50	**100**	<100	**100**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW201	GW201	15/07/2021	810687	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW216	GW216	5/07/2021	808027	**30**	**30**	**390**	**390**	**2100**	<100	**2490**	**20**	**230**	**2100**	<100	**2330**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW219	GW219	5/07/2021	808027	<20	<20	**280**	**280**	**300**	<100	**580**	<20	**500**	**100**	<100	**600**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
20210705_D01	GW219	5/07/2021	808027	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
20210705_T01	GW219	5/07/2021	ES2124885	<20	<20	<100	<100	<100	<100	<100	<20	<50	<100	<50	<50	<1	<2	<2	<2	<2	<1	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW222	GW222	5/07/2021	808027	<20	<20	<50	<50	**300**	<100	**300**	<20	<50	**300**	<100	**300**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
20210705_D02	GW222	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20210705_T02	GW222	5/07/2021	ES2124885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW223	GW223	5/07/2021	808027	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW225	GW225	5/07/2021	808027	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW228	GW228	5/07/2021	808027	**40**	**40**	**1200**	**1200**	**500**	<100	**1700**	**30**	**1100**	<100	<100	**1100**	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW252	GW252	15/07/2021	810687	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW253	GW253	15/07/2021	810687	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
GW254	GW254	15/07/2021	810687	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	**2**	**1**	-	**3**	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
MW01	MW01	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
MW02	MW02	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
MW05	MW05	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
D01_210623	MW05	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
T01_210623	MW05	23/06/2021	ES2123912	<20	<20	<100	<100	<100	<100	<100	<20	<50	<100	<50	<50	<1	<2	<2	<2	<2	<1	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<50	<50	<5	<50
SW245	SW245	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW246	SW246	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW251	SW251	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X2	X2	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
X4	X4	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
X5	X5	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
X7	X7	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
X8	X8	23/06/2021	806169	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100	<1	<1	<1	<2	<1	-	<3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
Statistical Summary																																														
Number of Results				24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	2	24	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	23	23	23	23	
Number of Detects				2	2	4	4	6	0	6	2	3	5	0	6	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Minimum Concentration				<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<50	<50	<1	<1	<1	<2	<1	<1	<2	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<1	<1	<1	<1
Minimum Detect				30	30	280	260	200	ND	200	20	230	100	ND	100	ND	ND	ND	2	1	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Maximum Concentration				40	40	1200	1200	2100	<100	2490	30	1100	2100	<100	2330	<1	<2	<2	2	<2	<1	3	<5	<5	<5	<5	<5	<0.005	<0.005	<5	<5	<5	<1	<5	<1	<1	<1	<1	<1	<5	<5	<1	<50	<50	<5	<50
Maximum Detect				40	40	1200	1200	2100	ND	2490	30	1100	2100	ND	2330	ND	ND	ND	2	1	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Average Concentration				12	12	114	112	217	50	308	11	98	194	48	266	0.5	0.54	0.54	1	0.56		1.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.0025	2.5	2.5	2.5	0.5	2.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	1.6	1.6	0.59	1.6
Median Concentration				10	10	25	25	50	50	50	10	25	50	50	50	0.5	0.5	0.5	1	0.5	0.5	1.5	2.5	2.5	2.5	2.5	2.5	0.0025	0.0025	2.5	2.5	2.5	0.5	2.5	0.5	0.5	0.5	0.5	0.5	2.5	2.5	0.5	0.5	0.5	0.5	0.5
Standard Deviation				7.2	7.2	253	252	448	0	618	4.5	237	460	7.1	538	0	0.14	0.14	0.2	0.17		0.35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.1	5.1	0.42	5.1
Number of Guideline Exceedances				0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	22	0	0	0	0	0	22	0	0	0	22	22	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	24	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

| | | | | Anilines | | Chlorinated Hydrocarbons | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | Halogenated Benzenes | | | | | | | | | | | | | | | Halogenated Hydrocarbons | | | | |
|---|---|---

| | | | | Metals | | | | | | | | | Phenols | | | | | | | | | | | | | | | | PAH | | | | | | | | | | | | | | | |

				PFOS/PFOA																											Organochlorine Pesticides																Herbicides	
				Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	Sum of US EPA PFAS (PFOS + PFOA)*	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	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	Perfluorodecanoic acid (PFDA)	Perfluorohexanoic acid (PFHxA)	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	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)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorooctanoic acid (PFOA)	4,4-DDE	a-BHC	Aldrin	b-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Pronamide	Trifluralin
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
EQL				0.01	0.01	0.01	0.02	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.05	0.05	0.05	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.05	0.01	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0.005
ADWG 2019 Aesthetic																																																	
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs																																										0.01					0.02			0.2	0.09			0.0044
NEPM 2013 HSL D GW for VI - 2-4m																																																	
NEPM 2013 HSL C GW for VI - 2-4m																																																	
NEPM 2013 Table 1C GILs, Fresh Waters																																										0.006					0.01			0.2	0.01			0.0026
NHMRC (2019) HBGV - Recreational Water																		2							2		2										10													
PFAS NEMP 2020 Freshwater 95%																									0.13												220													
PFAS NEMP 2020 Freshwater 99%																									0.00023												19													
Field_ID	**LocCode**	**Sampled_Date-Time**	**Lab_Report_Number**																																															
BH13	BH13	24/06/2021	806169	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.01**	<0.01	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW201	GW201	5/07/2021	808570	**21.07**	**19.27**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.34**	<0.01	**0.08**	**0.1**	<0.01	**23.02**	**21.5**	**20.8**	<0.01	<0.01	**0.23**	<0.05	<0.05	<0.05	**0.05**	**19**	<0.01	**0.05**	**1.8**	**1.1**	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.27**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW201	GW201	15/07/2021	810687	**17.62**	**16.22**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.24**	<0.01	**0.05**	**0.1**	<0.01	**19.42**	**18.03**	**17.4**	<0.01	**0.22**	<0.05	<0.05	<0.05	**0.04**	**16**	<0.01	**0.05**	**1.4**	**1.1**	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.22**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW216	GW216	5/07/2021	808027	**0.51**	**0.27**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.01**	<0.01	**0.03**	**0.05**	**0.01**	**0.74**	**0.69**	**0.47**	<0.01	**0.08**	<0.05	<0.05	<0.05	**0.04**	**0.23**	<0.01	**0.01**	**0.24**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.04**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW219	GW219	5/07/2021	808027	**0.04**	**0.02**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	<0.1	**0.09**	**0.04**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.02**	<0.01	**0.01**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
20210705_D01	GW219	5/07/2021	808027	**0.04**	**0.02**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	<0.1	**0.09**	**0.04**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.02**	<0.01	**0.01**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
20210705_T01	GW219	5/07/2021	ES2124885	-	-	<0.05	<0.02	<0.05	<0.1	<0.02	<0.02	<0.01	<0.02	**0.02**	-	**0.1**	**0.1**	**0.05**	<0.02	**0.02**	<0.05	<0.05	<0.05	<0.02	**0.02**	<0.02	<0.02	**0.03**	<0.02	<0.02	<0.05	<0.02	<0.02	<0.05	<0.05	**0.01**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW222	GW222	5/07/2021	808027	**0.06**	**0.04**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.05**	<0.01	**0.18**	**0.18**	**0.04**	<0.01	**0.04**	<0.05	<0.05	<0.05	<0.01	**0.02**	<0.01	**0.03**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.02**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
20210705_D02	GW222	5/07/2021	808027	**0.06**	**0.04**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.05**	<0.01	**0.18**	**0.18**	**0.04**	<0.01	**0.04**	<0.05	<0.05	<0.05	<0.01	**0.02**	<0.01	**0.03**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.02**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20210705_T02	GW222	5/07/2021	ES2124885	-	-	<0.05	<0.02	<0.05	<0.1	<0.02	<0.02	<0.01	<0.02	**0.06**	-	**0.21**	**0.21**	**0.05**	<0.02	**0.05**	<0.05	<0.05	<0.05	<0.02	**0.02**	<0.02	**0.03**	**0.03**	<0.02	<0.02	<0.05	<0.02	<0.02	<0.01	<0.05	**0.02**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW223	GW223	5/07/2021	808027	**0.23**	**0.04**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	**0.02**	**0.16**	**0.02**	**0.73**	**0.69**	**0.2**	<0.01	**0.14**	<0.05	<0.05	<0.05	**0.04**	**0.01**	<0.01	**0.06**	**0.19**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	**0.06**	**0.03**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW225	GW225	5/07/2021	808027	**0.12**	**0.08**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	**0.17**	**0.17**	**0.11**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.07**	<0.01	**0.01**	**0.04**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.01**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW228	GW228	5/07/2021	808027	**3.29**	**2.97**	<0.01	<0.05	<0.05	**0.06**	<0.01	**0.04**	<0.01	**0.04**	**0.18**	**0.01**	**3.91**	**3.82**	**3.22**	<0.01	**0.16**	<0.05	<0.05	<0.05	**0.05**	**2.9**	<0.01	**0.08**	**0.32**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.07**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW01	MW01	23/06/2021	806169	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	**<0.01**	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW02	MW02	23/06/2021	806169	**0.07**	**0.05**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.05**	<0.01	**0.2**	**0.2**	**0.04**	<0.01	**0.05**	<0.05	<0.05	<0.05	<0.01	**0.02**	<0.01	**0.03**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.03**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
MW05	MW05	23/06/2021	806169	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.03**	<0.01	<0.1	**0.06**	<0.01	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**<0.01**	<0.01	**0.01**	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
D01_210623	MW05	23/06/2021	806169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
T01_210623	MW05	23/06/2021	ES2123912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW245	SW245	5/07/2021	808027	**0.09**	**0.09**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.18**	**0.18**	**0.07**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.07**	<0.01	**0.01**	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	0.01	**0.05**	**0.02**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW246	SW246	5/07/2021	808027	**0.03**	**0.03**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.07**	**0.01**	**0.18**	**0.17**	**0.03**	<0.01	**0.04**	<0.05	<0.05	<0.05	<0.01	**0.01**	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW251	SW251	5/07/2021	808027	**0.11**	**0.02**	<0.01	<0.05	<0.05	0.09	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	**0.24**	**0.23**	**0.11**	<0.01	**0.02**	<0.05	<0.05	<0.05	**0.01**	**0.02**	<0.01	<0.01	**0.09**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW252	GW252	15/07/2021	810687	**4.26**	**3.16**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.05**	<0.01	**0.07**	**0.05**	<0.01	**5.24**	**4.65**	**4.2**	<0.01	**0.24**	<0.05	<0.05	<0.05	**0.06**	**3.1**	<0.01	0.04	**1.1**	**0.46**	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.06**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW253	GW253	15/07/2021	810687	**3.67**	**3.45**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.04**	<0.01	**0.01**	**0.02**	<0.01	**5.4**	**3.75**	**3.62**	<0.01	**0.05**	<0.05	<0.05	<0.05	<0.01	**3.4**	<0.01	0.01	**0.22**	**1.6**	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.05**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
GW254	GW254	15/07/2021	810687	**10.18**	**5.08**	<0.01	<0.05	<0.05	<0.05	<0.01	**0.2**	<0.01	**0.18**	**0.18**	<0.01	**11.31**	**10.9**	**9.9**	<0.01	**0.33**	<0.05	<0.05	<0.05	**0.06**	**4.8**	<0.01	0.15	**5.1**	**0.02**	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.28**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
X2	X2	23/06/2021	806169	**0.01**	**0.01**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.04**	<0.01	**0.1**	**0.1**	<0.01	<0.01	**0.03**	<0.05	<0.05	<0.05	<0.01	**<0.01**	<0.01	**0.02**	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.01**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
X4	X4	23/06/2021	806169	**0.05**	**0.03**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.06**	<0.01	**0.18**	**0.18**	**0.03**	<0.01	**0.04**	<0.05	<0.05	<0.05	<0.01	**0.01**	<0.01	**0.03**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	**0.02**	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
X5	X5	23/06/2021	806169	**0.02**	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.03**	<0.01	<0.1	**0.09**	**0.02**	<0.01	**0.03**	<0.05	<0.05	<0.05	<0.01	**<0.01**	<0.01	**0.01**	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
X7	X7	23/06/2021	806169	**0.1**	**0.08**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	**0.14**	**0.14**	**0.1**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.08**	<0.01	<0.01	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
X8	X8	23/06/2021	806169	**0.17**	**0.15**	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	**0.02**	<0.01	**0.21**	**0.21**	**0.17**	<0.01	**0.02**	<0.05	<0.05	<0.05	<0.01	**0.15**	<0.01	<0.01	**0.02**	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005

Statistical Summary

Number of Results				25	25	27	27	27	27	27	27	27	27	27	25	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	22	22	22	22	22	22	22	22	22	22	22	22	18	18	18
Number of Detects				22	21	0	0	0	2	0	7	0	9	24	4	21	25	23	0	25	0	0	0	8	22	0	20	21	5	0	0	0	0	1	3	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.01	<0.01	<0.01	<0.02	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.05	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
Minimum Detect				0.01	0.01	ND	ND	ND	0.06	ND	0.01	ND	0.01	0.01	0.01	0.1	0.06	0.02	ND	0.02	ND	ND	ND	0.01	0.01	ND	0.01	0.02	0.02	ND	ND	ND	ND	0.01	0.05	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				21.07	19.27	<0.05	<0.05	<0.05	<0.1	<0.02	0.34	<0.01	0.18	0.18	0.02	23	21.5	20.8	<0.02	0.33	<0.05	<0.05	<0.05	0.06	19	<0.02	0.15	5.1	1.6	<0.05	<0.05	<0.02	<0.02	<0.05	0.06	0.28	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005
Maximum Detect				21.07	19.27	ND	ND	ND	0.09	ND	0.34	ND	0.18	0.18	0.02	23	21.5	20.8	ND	0.33	ND	ND	ND	0.06	19	ND	0.15	5.1	1.6	ND	ND	ND	ND	0.01	0.06	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				2.5	2	0.0065	0.024	0.025	0.031	0.0054	0.038	0.005	0.022	0.053	0.006	2.7	2.5	2.3	0.0054	0.072	0.025	0.025	0.025	0.017	1.9	0.0054	0.027	0.4	0.16	0.024	0.0065	0.0054	0.0054	0.0059	0.028	0.046	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.00025
Median Concentration				0.09	0.04	0.005	0.025	0.025	0.025	0.005	0.005	0.005	0.005	0.04	0.005	0.18	0.18	0.05	0.005	0.03	0.025	0.025	0.025	0.005	0.02	0.005	0.01	0.02	0.005	0.025	0.005	0.005	0.005	0.005	0.025	0.02	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.00025
Standard Deviation				5.6	4.9	0.0053	0.004	0	0.015	0.0013	0.083	0	0.038	0.05	0.003	5.9	5.5	5.3	0.0013	0.087	0	0	0	0.02	4.7	0.0013	0.032	1	0.41	0.004	0.0053	0.0013	0.0013	0.0039	0.0092	0.079	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	6	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	22	22	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	22	0	0	21	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			Phthalates						Solvents					SVOCs								VOCs			SVOC
	Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	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	cis-1,4-Dichloro-2-butene	trans-1,4-Dichloro-2-butene	Dibenz(a,j)acridine	Pentachloroethane	3&4-Methylphenol (m&p-Cresol)
	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	MG/L
EQL	0.003	1	1	1	1	5	5	5	5	5	5	5	5	5	1	1	0.001	0.001	1	5	5	5	5	5	5	5	5			0.005		0.006
ADWG 2019 Aesthetic					4																											
ANZG (2018) Freshwater 95% LOSP Toxicant DGVs				30							1000	3700	26																		80	
NEPM 2013 HSL D GW for VI - 2-4m																																
NEPM 2013 HSL C GW for VI - 2-4m																																
NEPM 2013 Table 1C GILs, Fresh Waters											1000	3700	10																			
NHMRC (2019) HBGV - Recreational Water																																
PFAS NEMP 2020 Freshwater 95%																																
PFAS NEMP 2020 Freshwater 99%																																

Field_ID	LocCode	Sampled_Date-Time	Lab_Report_Number																													
BH13	BH13	24/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	**0.012**	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW201	GW201	5/07/2021	808570	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW201	GW201	15/07/2021	810687	0.003	<1	<1	3	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW216	GW216	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	**4**	**4**	**0.015**	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW219	GW219	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
20210705_D01	GW219	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
20210705_T01	GW219	5/07/2021	ES2124885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW222	GW222	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
20210705_D02	GW222	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20210705_T02	GW222	5/07/2021	ES2124885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GW223	GW223	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW225	GW225	5/07/2021	808027	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW228	GW228	5/07/2021	808027	<0.003	<1	<1	**2**	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW252	GW252	15/07/2021	810687	<0.003	<1	<1	**<1**	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW253	GW253	15/07/2021	810687	<0.003	<1	<1	**<1**	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
GW254	GW254	15/07/2021	810687	0.003	<1	<1	**<1**	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
MW01	MW01	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
MW02	MW02	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
MW05	MW05	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
D01_210623	MW05	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
T01_210623	MW05	23/06/2021	ES2123912	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	-	<5	-
SW245	SW245	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW246	SW246	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW251	SW251	5/07/2021	808027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
X2	X2	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
X4	X4	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
X5	X5	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
X7	X7	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006
X8	X8	23/06/2021	806169	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	-	-	<0.005	-	<0.006

Statistical Summary

Number of Results	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	1	1	22	1	22
Number of Detects	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration	<0.003	<1	<1	<1	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<1	<1	<0.001	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<0.006
Minimum Detect	0.003	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	4	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	0.003	<1	<1	3	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	4	4	0.015	<0.001	<1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<0.006
Maximum Detect	0.003	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	4	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.0016	0.5	0.5	0.68	0.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.66	0.66	0.0017	0.0005	0.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5			0.0025		0.003
Median Concentration	0.0015	0.5	0.5	0.5	0.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.5	0.5	0.0005	0.0005	0.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	0.0025	2.5	0.003
Standard Deviation	0.0004	0	0	0.61	0	0	0	0	0	0	0	0	0	0	0.75	0.75	0.0039	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
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

Location	Date	Flow	Barometric Pressure	Pump Duration	Stabilised						CH_4 GSV**	CO_2 GSV**	Comments
					CH_4	CO_2	O_2	H_2S	CO	Differential Pressure			
		l/hr	mb	Sec	% v/v	% v/v	% v/v	ppm	ppm	mb			
NSW EPA (2016) Solid Waste Landfill Guidelines					**1.0**	**1.5**							
GW201	14.07.21	0.4	1014	60	0.0	3.3	8.2	0	0	1	0.000	0.013	
GW207	14.07.21	0.3	1013	60	0	2	19	0	0	1	0.000	0.006	
MW02	14.07.21	0.8	1013	60	0.0	6.5	5.8	0	0	4	0.000	0.052	
MW01	14.07.21	0.5	1011	60	4.4	7.5	0.9	0	1	2	0.022	0.038	
MW107	14.07.21	0.0	1012	60	51	4	0	0	1	2	0.000	0.000	
MW05	14.07.21	1.0	1011	60	9.2	12.9	0.3	0	0	5	0.092	0.129	
GW235	14.07.21	0.4	1011	60	0.0	0.5	12.0	0	1	1	0.000	0.002	
GW233	14.07.21	0.3	1012	60	0.0	5.1	13.9	0	1	1	0.000	0.015	
GW230	14.07.21	0.4	1011	60	0.0	7.9	4.3	0	1	2	0.000	0.032	Flow fell from 0.4 to 0.0; D. Pressure fell from 0.2 to 0.0
GW216	14.07.21	-12.4	1011	60	0.0	0.0	19.0	0	3	-50	0.000	0.000	flow fell from -12.36 to 0.0, D. Pressure fell from -50 to 0.0
GW219	14.07.21	0.0	1011	60	0.0	2.0	19.0	0	1	0	0.000	0.000	
X8*	14.07.21	-19.2	1011	60	0.0	3.7	18.7	0	1	-142	0.000	-0.710	Flow fell from -19.2 to 0.3, D. Pressure fell from -142 to -17.
GW228	14.07.21	0.3	1010	60	0.0	0.2	20.8	0	1	1	0.000	0.001	
GW223	14.07.21	0.2	1010	60	0.0	0.8	19.8	0	1	0	0.000	0.002	
GW222	14.07.21	0.4	1010	60	0.0	6.5	6.9	0	1	5	0.000	0.026	
GW225	14.07.21	0.3	1009	60	0.0	2.4	18.4	0	0	2	0.000	0.007	
Maximum:		1.0			51.0	12.9				**Site GSV:*** **	0.510	0.129	

**Flow and D. Pressure readings from X8 did not stablilise*

*** GSV calculated for each well as Flow (L/r) x Methane (%v/v) (or Carbon Dioxide %v/v)*

**** Site GSV Calculated as Max. Flow (L/hr) x Max. Methane (%v/v)(or Carbon Dioxide %v/v)*

APPENDIX C BORELOGS

BORE LOG ID GW219

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 30/06/2021 - 30/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.3

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.2				
CONCRETE:							
FILL: CLAYEY SAND; Brown, becomes wet at base			0.4				
No logging or samples due to NDD			0.6				
			0.8				
			1				
			1.2				
			1.4				
			1.6				
			1.8				
			2				
			2.2				
	▽		2.4				
CLAYEY SAND; Brown, wet, fine to medium grained, low plasticity			2.6	YES		GW219_2.5	
			2.8				
			3				
			3.2				
			3.4				
			3.6				
			3.8				
			4	YES		GW219_4.0	
Termination Depth at:4 m			4.2				
			4.4				
			4.6				
			4.8				

Disclaimer This log is intended for environmental not geotechnical purposes.
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BORE LOG ID GW222

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 30/06/2021 - 30/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 3

Comments:

Log By: A. Richard
Checked By:

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT: FILL: SANDY GRAVEL; Dark grey/brown, roadbase ASPHALT: FILL: SANDY GRAVEL; Dark grey/brown, roadbase No logging or samples due to NDD			0.2 0.4 0.6 0.8 1				Scrap metal, slag, brick and metal fragments
CLAYEY SAND: Brown/ dark brown, medium grained and medium plasticity			1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8	YES	0.8	GW222_2.0	
			4	YES	0.4	GW222_4.0	
Termination Depth at:4 m			4.2 4.4 4.6 4.8				

BORE LOG ID GW223

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 30/06/2021 - 30/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 3

Elevation (Ground):
Elevation (Case):
Easting (MGA):
Northing (MGA):

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:							
FILL: GRAVELLY SAND; Brown, coarse, angular, compact, low plasticity, moderately sorted			0.2	YES	0.1	GW223_0.2	Roadbase
No logging or samples due to NDD			0.4				
			0.6				
			0.8				
			1				
			1.2				
			1.4				
			1.6				
			1.8				
			2				
			2.2				
			2.4				
FILL: CLAYEY SAND; Dark grey/ brown and black, poorly sorted, medium plasticity, angular gravel inclusions. Minor hydrogen sulphide odour			2.6				
			2.8				
			3	YES	0.1	GW223_3.0	
			3.2				
			3.4				
			3.6				
			3.8				
			4				
			4.2				
			4.4				
Termination Depth at:4.4 m			4.6				
			4.8				

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BORE LOG ID GW225

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 30/06/2021 - 30/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 3

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:							
CONCRETE:							Roadbase
GRAVELLY SAND: Brown, coarse, angular, compact, low plasticity, moderately sorted			0.2				
FILL: SAND; Brown, medium grained, well sorted, low plasticity			0.4	YES	0.0	GW225_0.5	
No logging or samples due to NDD			0.6				
			0.8				
			1				
			1.2				
			1.4				
			1.6				
			1.8				
	▽		2				
			2.2				
			2.4				
SAND: Grey/ brown, medium grained, well sorted, low to medium plasticity			2.6				
			2.8				
			3	YES	0.1	GW225_3.0	
			3.2				
			3.4				
			3.6				
			3.8				
			4				
Termination Depth at:4 m			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID GW228

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 1/07/2021 - 1/07/2021

Drilling Method: Augering Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
No samples or logging due to NDD			0.2, 0.4, 0.6, 0.8, 1, 1.2, 1.4, 1.6, 1.8				
FILL: SILTY CLAYEY SAND; Black, fine to medium grained, medium plasticity, poorly sorted, foreign material inclusions of brick, rock and glass. Hydrogen sulphide odour			2, 2.2, 2.4, 2.6, 2.8, 3, 3.2, 3.4, 3.6, 3.8, 4	YES	1.2	GW228_3.0	
				YES	0.5	GW228_4.0	
Termination Depth at:4 m			4.2, 4.4, 4.6, 4.8				

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BORE LOG ID GW230

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 28/06/2021 - 28/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.0

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT: FILL: SAND; brown, medium to coarse grain, low plasticity, moderately sorted			0.2 0.4 0.6 0.8	YES	0.1	GW230_0.6	
FILL: CLAYEY SAND; Dark brown, coarse grained, inclusions of brick and terracotta rubble			1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4	YES	0.2	GW230_3.0	
Termination Depth at:4.057 m			4.2 4.4 4.6 4.8				

BORE LOG ID GW233

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 29/06/2021 - 29/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.8

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0				
FILL: Roadbase/ Crushed Concrete							
FILL: SAND; Brick, ceramic and rubble inclusions. No samples due to NDD			0.2				
			0.4				
			0.6				
			0.8				
			1				
			1.2				
			1.4				
			1.6				
			1.8				
			2				
			2.2				
FILL: GRAVELLY SANDY CLAY; Brown, coarse, angular gravels, medium plasticity			2.4	YES	1.2	GW233_2.5	
			2.6				
			2.8				
CLAYEY SAND; Dark grey, fine to coarse grained, medium plasticity			3				
			3.2				
			3.4				
			3.6				
			3.8				
			4	YES	0.9	GW233_4.0	
Termination Depth at:4 m			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID GW235

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 29/06/2021 - 29/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 1.6

Elevation (Ground):
Elevation (Case):
Easting (MGA):
Northing (MGA):

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT: CONCRETE:			0.2				
FILL: SANDY GRAVEL; Grey, coarse, angular, compact, low plasticity, moderately sorted			0.4		0.1	GW235_0.3	
No logging or samples due to NDD			0.6				
			0.8				
FILL: SILTY SAND; Brown, frequent sandstone boulders			1				
			1.2				
			1.4				
			1.6				
			1.8				
			2				
			2.2				
			2.4				
FILL: SANDY GRAVEL; Grey, poorly sorted, angular			2.6				
			2.8				
			3		0.1	GW235_3.0	
			3.2				
			3.4				
			3.6				
			3.8				
			4				
Termination Depth at:4 m			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID GW201

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 1/07/2021 - 1/07/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.0

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT: GRAVELLY SAND; Brown, coarse, angular, compact, low plasticity, moderately sorted			0.2				
FILL:			0.4				
CONCRETE:			0.6				
SAND: Grey/ brown, medium to coarse grained, moderately sorted, medium plasticity, no foreign material inclusions			0.8				
			1				
			1.2				
			1.4	YES	0.2	GW201_1.5	
			1.6				
			1.8				
			2				
			2.2				
			2.4				
			2.6				
			2.8				
			3	YES	0.8	GW201_3.0	
			3.2				
			3.4				
			3.6				
			3.8				
Termination Depth at:3.8 m			4				
			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID GW206

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 29/06/2021 - 29/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.0

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
CONCRETE:			0				
No logging or samples due to NDD			0.2				
			0.4				
			0.6				
			0.8				
			1				
			1.2				
			1.4				
			1.6				
			1.8				
	▽		2				
			2.2				
CLAYEY SAND: Dark grey, fine to medium grained, poorly sorted, medium plasticity			2.4	YES	0.4	GW206_2.5	
			2.6				
			2.8				
			3				
			3.2				
			3.4				
			3.6				
			3.8				
			4	YES	0.7	GW206_4.0	
Termination Depth at:4 m			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID GW207

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 28/06/2021 - 29/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 1.8

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: SILTY SAND; medium to coarse grained, gravels present, inclusions of foreign materials including metal wire and ACM			0.2 0.4 0.6	YES	0.1	GW207_0.6	Hand auger refusal @ 0.7m bgl ACM Fragment found @ 0.5m bgl
No logging due to NDD			0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4				
CLAYEY SAND: Dark grey, fine to medium grained, poorly sorted, medium plasticity			2.6 2.8 3 3.2 3.4 3.6 3.8	YES	0.3	GW207_3.0	
Termination Depth at:4 m			4 4.2 4.4 4.6 4.8				

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BORE LOG ID GW216

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 28/06/2021 - 28/06/2021

Drilling Method: Augering - Solid Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 1.6

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
CONCRETE:			0.2				Handauger refusal at 0.5m bgl
FILL: GRAVELLY SAND; Dark grey, coarse, compact, low plasticity, moderately sorted			0.4				
			0.6				
			0.8				
			1	YES	0.4	GW216_1.0	SFA grinds through concrete piece @ 1.1m bgl
			1.2				
			1.4				
			1.6				
CLAYEY SAND: Dark grey, medium to coarse grained, poorly sorted, medium plasticity			1.8				
			2				
			2.2				
			2.4				
			2.6				
			2.8				
			3	YES	0	GW216_3.0	
			3.2				
			3.4				
			3.6				
			3.8				
			4				
Termination Depth at:4.151 m			4.2				
			4.4				
			4.6				
			4.8				

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BORE LOG ID BH208

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 2/07/2021 - 2/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
CONCRETE:			0.1				
FILL: GRAVELLY SAND; Grey/ brown, coarse, compact, low plasticity, moderately sorted			0.2	YES	0.3	BH208_0.3	Roadbase
			0.3				
			0.4				
			0.5				
			0.6				
			0.7				
			0.8				
			0.9				
			1				
			1.1	YES	0.3	BH208_1.2	
			1.2				
			1.3				
			1.4				
			1.5				Hand Auger Refusal
Termination Depth at:1.5 m			1.6				
			1.7				
			1.8				
			1.9				

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BORE LOG ID BH209

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 2/07/2021 - 2/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): 1.6

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0				
FILL: GRAVELLY SAND; Grey/ brown, coarse, compact, low plasticity, moderately sorted			0.1	YES	0.5	BH209_0.1	Roadbase
FILL: SAND; Grey, coarse sands, gravels, low plasticity			0.2		0.5	BH209_0.2	
FILL: SANDY GRAVEL; Yellow/ brown/ white, moderately sorted, coarse, medium plasticity			0.4				Crushed Sandstone
			0.6		0.4	BH209_0.7	
SAND; Light grey, coarse sand, well sorted, medium plasticity			0.9				
SAND: Brown, fine to medium grained, well sorted			1.1				
			1.3	YES	0.5	BH209_1.4	
			1.6				
Termination Depth at:1.7 m			1.7				
			1.8				
			1.9				

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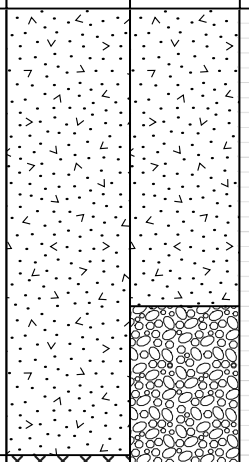
BORE LOG ID BH215

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 1/07/2021 - 1/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
CONCRETE:			0.05 0.1 0.15 0.2 0.25				
FILL: GRAVELLY SAND; Grey/ brown, coarse, compact, low plasticity, moderately sorted			0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7	YES	0.4	BH215_0.4	Roadbase REFUSAL with Handauger
Termination Depth at:0.7 m			0.75 0.8 0.85 0.9 0.95				

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BORE LOG ID BH217

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 1/07/2021 - 1/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
CONCRETE:			0.05 0.1 0.15 0.2 0.25 0.3	YES	0.3	BH217_0.4	
FILL: GRAVELLY SAND; Dark grey, coarse, compact, low plasticity, moderately sorted			0.35 0.4 0.45 0.5 0.55 0.6 0.65 0.7 0.75 0.8				Roadbase REFUSAL with Handauger
Termination Depth at:0.8 m			0.85 0.9 0.95				

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BORE LOG ID BH220

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 1/07/2021 - 1/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:							
CONCRETE:			0.05 0.1 0.15 0.2 0.25				
FILL: CLAYEY SAND; Fine to medium grained, poorly sorted, low plasticity, heavily compacted, crushed sandstone inclusions			0.3 0.35 0.4 0.45 0.5 0.55 0.6	YES		BH220_0.4	REFUSAL with Handauger
Termination Depth at:0.6 m			0.65 0.7 0.75 0.8 0.85 0.9 0.95				

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BORE LOG ID BH231

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 2/07/2021 - 2/07/2021

Drilling Method: Hand Augering:
Hole Diam./Width (mm): 100
Surface Completion: Concrete
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.02				
			0.04				
CONCRETE:			0.06				
			0.08				
FILL: GRAVELLY SAND; Brown, coarse, angular, compact, low plasticity, moderately sorted			0.1	YES	0.1	BH231_0.1	Roadbase
			0.12				REFUSAL on another concrete slab
			0.14				
Termination Depth at:0.15 m			0.16				
			0.18				
			0.2				
			0.22				
			0.24				
			0.26				
			0.28				
			0.3				
			0.32				
			0.34				
			0.36				
			0.38				
			0.4				
			0.42				
			0.44				
			0.46				
			0.48				

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BORE LOG ID BH234

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 2/07/2021 - 2/07/2021

Drilling Method: Hand Augering
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: GRAVELLY SILTY SAND; Brown, poorly sorted, medium plasticity			0.05	YES	0.2	BH234_0.1	Topsoil
			0.1				
			0.15				
FILL: GRAVELLY SAND; Grey/ Brown, very compacted, poorly sorted, medium plasticity, angular gravels			0.2				
			0.25				
			0.3	YES		BH234_0.4	
			0.35		0.1		
			0.4				
			0.45				
			0.5				
			0.55				
			0.6				
			0.65				
			0.7				
			0.75				REFUSAL with Handauger
Termination Depth at:0.8 m			0.8				
			0.85				
			0.9				
			0.95				

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BORE LOG ID TP202 (BH)

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 2/07/2021 - 2/07/2021

Drilling Method: Hand Auger
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments: Soil Bore replacing Test Pit due to spatial constraints

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: SILTY SAND; Brown, fine grained, poorly sorted, low to medium plasticity, high organic content, minor amounts of gravel			0.1				Converted to Hand Auger from Test Pit
			0.2	YES	0.2	TP202_0.3	
FILL: SAND; medium to coarse grained, gravels present			0.3				
			0.4				
			0.5				
SAND: Brown, fine to medium grained, well sorted, medium plasticity			0.6				
			0.7	YES	0.1	TP202_0.8	
			0.8				
			0.9				
			1				
SAND: Grey, medium to coarse grained, moderately sorted, medium plasticity			1.1	YES	0.1	TP202_1.2	
			1.2				
			1.3				
			1.4				
SILTY SAND: Dark Grey, wet, fine to medium grained, moderately sorted, medium plasticity			1.5				
			1.6				
			1.7	YES	0.1	TP202_1.8	
			1.8				
Termination Depth: 1.9m bgl			1.9				

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BORE LOG ID TP210

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 23/06/2021 - 23/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): 1.9

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.1				
FILL: Roadbase; Coarse Sand and Gravel, dark grey, low plasticity			0.2				
			0.3				
FILL: Sandy Clay with rocks, grey to brown. >70% sandstone rocks and boulders			0.4				
			0.5				
			0.6				
			0.7		0.1		
			0.8				
			0.9				
			1				
			1.1				
			1.2				
SAND: Brown to grey, coarse, medium plasticity			1.3		0	TP210_1.4	
			1.4				
			1.5				
			1.6				
			1.7				
SAND: Dark Grey, fine to medium grained, medium plasticity, wet			1.8		0.2	TP210_1.8	
			1.9				
Termination Depth at:1.9 m			2				
			2.1				
			2.2				
			2.3				
			2.4				

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BORE LOG ID TP211

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 23/06/2021 - 23/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): 1.9

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0				
FILL: Crushed Concrete, dense			0.1				
			0.2				
			0.3				
			0.4				
FILL: Roadbase; Gravelly sands, coarse, brown to grey, minor foreign materials, no odour			0.5		0.1	TP211_0.5	
			0.6				
			0.7				
SAND: Grey to brown, medium grained, low plasticity, no inclusions, no odour			0.8				
			0.9				
			1		0.2	TP211_1.0	
			1.1				
			1.2				
			1.3				
			1.4				
			1.5				
			1.6				
			1.7				
			1.8				
			1.9				
			2				
Termination Depth at:2 m			2.1				
			2.2				
			2.3				
			2.4				

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BORE LOG ID TP212

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 23/06/2021 - 23/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): 1.8

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.1				
FILL: Roadbase; Dark grey coarse sand and gravel, very compact			0.2				
FILL: Sand, dark grey, coarse, low plasticity, inclusions of rocks and gravels			0.3		0.2		
			0.4				
FILL: Sand, light yellow to brown, coarse, low plasticity, minor inclusions of sandstone blocks and gravels			0.5				
			0.6			TP212_0.7	
			0.7		0.2		
			0.8				
			0.9				
			1				
FILL: Sandy Clay; Dark brown, mottled, minor inclusions of gravel			1.1				
			1.2				
			1.3				
FILL: Silty Clay; Dark brown to black, soft, medium plasticity, inclusions of wood and metal, hydrogen sulphide odour			1.4				
			1.5				
			1.6				
			1.7			TP212_1.8	
	▽		1.8		0.7		
			1.9				
Termination Depth at:1.9 m			2				
			2.1				
			2.2				
			2.3				
			2.4				

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BORE LOG ID TP213

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 23/06/2021 - 23/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.1		0.3		
FILL: Roadbase; Dark grey coarse sand and gravel, very compact			0.2				
FILL: Clayey Sand; heavily compacted, large amount of rocks, no other inclusions or odour			0.3 0.4 0.5 0.6 0.7 0.8		0.1	TP213_0.6	
FILL: Gravel; Dark Grey, fine, no inclusions, no odour			0.9 1 1.1 1.2		0.1	TP213_1.0	
FILL: Clay; Mottled grey and red, medium firm, high plasticity, heavily compacted, no inclusions and no odour			1.3 1.4 1.5 1.6 1.7 1.8 1.9		0.4	TP213_1.5	
Termination Depth at:1.9 m			2 2.1 2.2 2.3 2.4				

BORE LOG ID TP214

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 22/06/2021 - 22/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0				
FILL: Roadbase; Dark grey coarse sand and gravel, very compact			0.1				
			0.2				
FILL: Large block of concrete or footing across most of the test pit			0.3				
			0.4				
			0.5				
			0.6				
FILL: Clayey Sand; Brown to grey, coarse, low plasticity, no inclusions, no staining			0.7		0.1	TP214_0.8	
			0.8				
FILL: Clayey Silty Sand; Dark grey, coarse, low plasticity, inclusions of ACM (pipe fragment), brick, metal, wood, paper, terracotta, rubbish, glass, hydrogen sulphide odour			0.9				Abundant FMT layer including ACM
			1				
			1.1		4.8	TP214_1.2	
			1.2				
			1.3				
			1.4				
			1.5				
			1.6				
			1.7				
			1.8				
Termination Depth at:1.8 m			1.9				
			2				
			2.1				
			2.2				
			2.3				
			2.4				

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BORE LOG ID TP221

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 24/06/2021 - 24/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.1				
FILL: Roadbase; Dark grey coarse sand and gravel, very compact			0.2		0	TP221_0.2	
SAND: Light brown, medium grain, low plasticity, well sorted			0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9		0	TP221_1.0	
Termination Depth at:2 m			2 2.1 2.2 2.3 2.4				

BORE LOG ID TP224

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 24/06/2021 - 24/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): 2.0

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0				
FILL: Sand; Brown, fine to medium grained, moderately sorted, inclusions of gravels and rock			0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1		0.2	TP224_0.5	
FILL: Sand; Brown, frequent inclusions of brick, gravel, metal and rubbish			1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2		0.3	TP224_1.5	
Termination Depth at:2 m			2.1 2.2 2.3 2.4				

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BORE LOG ID TP232

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 24/06/2021 - 24/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
ASPHALT:			0.1				
FILL: Crushed Concrete			0.2				
FILL: Clayey Sand; Grey to brown, coarse grained, low plasticity, extremely compact, minor inclusions of brick and concrete			0.3				
FILL: Sand; Brown, extremely compact, fine to medium grained, medium plasticity, minor inclusions of gravels			0.4		0.2	TP232_0.5	
			0.5				
			0.6				
			0.7				
			0.8				
			0.9				
			1				
			1.1		0.1	TP232_1.2	
			1.2				
			1.3				
			1.4				
			1.5				
			1.6				
			1.7				
Termination Depth at:1.7 m			1.8				
			1.9				
			2				
			2.1				
			2.2				
			2.3				
			2.4				

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BORE LOG ID SP236

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Qantas Jet Base Additional Investi
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 22/06/2021 - 22/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: Clayey Sand; Dark brown to grey, fine to medium grained, low plasticity, inclusions of sandstone, wood, metal and glass, no odour, no staining			0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1			SP236_0.4	
Termination Depth at:1.1 m			1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9				

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BORE LOG ID SP237

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 22/06/2021 - 22/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: Clayey Sand; Dark brown to grey, fine to medium grained, low plasticity, inclusions of ACM, concrete rubble, brick and sandstone, no odour, no staining			0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4		0.2	SP237_0.7	ACM Fragment found
Termination Depth at:1.4 m			1.5 1.6 1.7 1.8 1.9				

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BORE LOG ID SP238

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 22/06/2021 - 22/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Backfill
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: Clayey Sand; Dark brown to grey, fine to medium grained, low plasticity, inclusions of concrete rubble, brick, steel and sandstone, no odour, no staining			0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4		0.1	SP238_0.7	
Termination Depth at:1.4 m			1.5 1.6 1.7 1.8 1.9				

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BORE LOG ID SP239

Client: Qantas Airways Limited
Project No: Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 22/06/2021 - 22/06/2021

Drilling Method: Bucket Excavation
Hole Diam./Width (mm): 600
Surface Completion: Asphalt
Final Water Level (m bgl): N/A

Comments:

Log By: A. Richards
Checked By: Ian Batterley

Material Description	Symbol	Backfill	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: Clayey Sand; Dark brown to grey, fine to medium grained, low plasticity, inclusions of concrete rubble, brick, steel and sandstone, no odour, no staining			0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5		0.1	SP239_0.7	
Termination Depth at:1.5 m			1.6 1.7 1.8 1.9				

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BORE LOG ID GW252 (BHA)

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Projecnt Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 13/07/2021

Drilling Method: Augering Hollow Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 2.0

Elevation (Ground): -
Elevation (Case): 3.361
Easting (MGA): 331978.766
Northing (MGA): 6244593.559

Comments:

Log By: Reditus
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	Samples	Additional Observations
ASPHALT:			0.2			
CLAYEY SAND: Black, wet, no odour, dry from 0.7m bgl.			0.4	YES	GW252_0.5	
			0.6			
			0.8		GW252_1.0	
SAND: Dark Brown, damp			1			
			1.2			
			1.4		GW252_1.5	
			1.6			
			1.8			
			2	YES	GW252_2.0	
SAND: Brown, wet			2.2			
			2.4			
SAND: Dark Brown, damp			2.6			
			2.8			
			3			
			3.2			
			3.4			
			3.6			
			3.8			Well collapse
Termination Depth at:4 m			4			
			4.2			
			4.4			
			4.6			
			4.8			

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BORE LOG ID GW253 (BHB)

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 13/07/2021

Drilling Method: Augering Hollow Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 1.8

Elevation (Ground): -
Elevation (Case): 3.187
Easting (MGA): 331957.762
Northing (MGA): 6244577.505

Comments:

Log By: Reditus
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	Samples	Additional Observations
SILTY SAND: (Topsoil) Black, containing mulch						
SAND: Brown, damp, loose, medium grained, well sorted			0.2		GW253_0.2	
				YES	GW253_0.25	
			0.4			
			0.6			
			0.8			
			1		GW253_1.0	
SAND: Dark Brown, damp, medium dense, well sorted			1.2			
			1.4			
			1.6		GW253_1.6	
			1.8			
			2	YES	GW253_2.0	
SAND: Light Brown, medium dense, well sorted, wet			2.2			
			2.4		GW253_2.5	
			2.6			
			2.8			
			3		GW253_3.0	
			3.2			
			3.4		GW253_3.5	
			3.6			
			3.8			Well collapse
			4		GW253_4.0	
Termination Depth at:4 m			4.2			
			4.4			
			4.6			
			4.8			

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BORE LOG ID GW254 (BHC)

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 13/07/2021

Drilling Method: Augering Hollow Flight
Hole Diam./Width (mm): 100
Surface Completion: Gatic
Final Water Level (m bgl): 1.7

Elevation (Ground): -
Elevation (Case): 3.029
Easting (MGA): 331956.042
Northing (MGA): 6244626.333

Comments:

Log By: Reditus
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	Samples	Additional Observations
SILTY SAND: (Topsoil) Dark brown, Sandy			0.2		GW254_0.2	
SAND: Light Brown, damp, well sorted, medium grained, medium density			0.4	YES	GW254_0.5	
SAND: Dark Brown, damp, well sorted, medium grained, medium density			0.6 0.8 1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8	YES	GW254_1.0 GW254_1.5 GW254_2.0 GW254_2.5 GW254_3.0 GW254_3.5 GW254_4.0	
Termination Depth at:4 m			4 4.2 4.4 4.6 4.8			

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BORE LOG ID TP218

Client: Qantas Airways Limited
Project No: 0607031 - Project Unicorn
Project Name: Due Diligence Site Investigation
Site Address: Lot A - Coward St and Kent Rd
Drilling Date: 30/06/2021 - 30/06/2021

Drilling Method: Hand Augering
Hole Diam./Width (mm): 100
Surface Completion: Backfill
Final Water Level (m bgl): 1.9

Comments: A hand augered borehole replaced this initial test pit location due to spatial constraints

Log By: A. Richard
Checked By: I. Batterley

Material Description	Symbol	Well Diagram	Depth (m)	Analysed	PID	Samples	Additional Observations
FILL: TOPSOIL: SILTY SAND; Brown, damp, loose, organics			0.1				
FILL: CRUSHED SANDSTONE; Orange, dry, compact, poorly sorted, angular			0.2				
SAND: Grey/ brown, fine to medium grained, poorly sorted, medium plasticity			0.3	YES		TP218_0.4	
			0.4				
SAND: Grey/ brown, coarse sand, medium to coarse grain, moderately sorted, low plasticity			0.5				
			0.6				
			0.7				
			0.8				
			0.9				
			1				
			1.1	YES		TP218_1.2	
			1.2				
			1.3				
			1.4				
			1.5				
			1.6				
			1.7				
			1.8				
			1.9				Becomes wet @ 1.9m bgl
Termination Depth at:1.9 m							

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APPENDIX D PHOTOLOG

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
1	31/5/2021

Direction Photo Taken:
South East

Description:
Upper Dam



Photo No.	Date:
2	31/5/2021

Direction Photo Taken:
North East

Description:
Upper Dam and Visible ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
3	31/5/2021

Direction Photo Taken:
West

Description:
Water Tower



Photo No.	Date:
4	31/5/2021

Direction Photo Taken:
South

Description:
ACM Pipe above ground



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
5	31/5/2021

Direction Photo Taken:
South

Description:
Raised ACM Pipe



Photo No.	Date:
6	31/5/2021

Direction Photo Taken:
North

Description:
ACM Pipe above ground and extra “spare” length



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
7	31/5/2021

Direction Photo Taken:
South

Description:
ACM Pipe Creek Crossing



Photo No.	Date:
8	31/5/2021

Direction Photo Taken:
South East

Description:
ACM Pipe Creek Crossing



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
9	31/5/2021

Direction Photo Taken:
North

Description:
ACM Pipe Creek Crossing



Photo No.	Date:
10	31/5/2021

Direction Photo Taken:
South

Description:
ACM Pipe Creek Crossing



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
11	31/5/2021

Direction Photo Taken:
North West

Description:
ACM Pipe Creek Crossings



Photo No.	Date:
12	31/5/2021

Direction Photo Taken:
South East

Description:
ACM Pipe Creek crossing and transition to rock covered pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
13	31/5/2021

Direction Photo Taken:
South

Description:
Rock Covered ACM Pipe



Photo No.	Date:
14	31/5/2021

Direction Photo Taken:
North

Description:
Rock Covered ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
15	31/5/2021

Direction Photo Taken:
North

Description:
ACM Pipe Run and Creek Crossings



Photo No.	Date:
16	31/5/2021

Direction Photo Taken:
South East

Description:
Rock Covered ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
17	31/5/2021

Direction Photo Taken:
North West

Description:
Rock Covered ACM Pipe



Photo No.	Date:
18	31/5/2021

Direction Photo Taken:
South

Description:
ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
19	31/5/2021

Direction Photo Taken:
South East

Description:
Exposed “spare” ACM Pipe adjacent to Rock Covered ACM Pipe



Photo No.	Date:
20	31/5/2021

Direction Photo Taken:
South East

Description:
Pipe transitions below ground



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
21	31/5/2021

Direction Photo Taken:
South East

Description:
Exposed and Broken ACM Pipe



Photo No.	Date:
22	31/5/2021

Direction Photo Taken:
North West

Description:
Potential ACM Pipe Termination



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
23	31/5/2021

Direction Photo Taken:
North

Description:
ACM Pipe downslope of installed location



Photo No.	Date:
24	31/5/2021

Direction Photo Taken:
West

Description:
ACM Pipe downslope of installed location



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
25	31/5/2021

Direction Photo Taken:
North East

Description:
ACM Pipe and Steel Pipe Junction



Photo No.	Date:
26	31/5/2021

Direction Photo Taken:
South East

Description:
ACM Pipe from Junction



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
27	31/5/2021

Direction Photo Taken:
North East

Description:
Steel Pipe up gradient of Junction



Photo No.	Date:
28	31/5/2021

Direction Photo Taken:
East

Description:
Fire Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
29	31/5/2021

Direction Photo Taken:
East

Description:
Fire Damaged ACM Pipe



Photo No.	Date:
30	31/5/2021

Direction Photo Taken:
East

Description:
Fire Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
31	31/5/2021

Direction Photo Taken:
North East

Description:
ACM Fragments from fire damage



Photo No.	Date:
32	31/5/2021

Direction Photo Taken:
East

Description:
Fire Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
33	31/5/2021

Direction Photo Taken:
North

Description:
Fire Damaged ACM Pipe



Photo No.	Date:
34	31/5/2021

Direction Photo Taken:
West

Description:
Fire Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
35	31/5/2021

Direction Photo Taken:
North East

Description:
Fire Damaged ACM Pipe



Photo No.	Date:
36	31/5/2021

Direction Photo Taken:
North West

Description:
Fire Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
37	31/5/2021

Direction Photo Taken:
West

Description:
Fire Damaged ACM Pipe



Photo No.	Date:
38	31/5/2021

Direction Photo Taken:
West

Description:
Damaged ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
39	31/5/2021

Direction Photo Taken:
West

Description:
Damaged Rock Covered ACM Pipe



Photo No.	Date:
40	31/5/2021

Direction Photo Taken:
North East

Description:
Non-ACM road crossing conduit



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
41	31/5/2021

Direction Photo Taken:
West

Description:
Ex-Situ ACM Pipe



Photo No.	Date:
42	31/5/2021

Direction Photo Taken:
North

Description:
Ex-Situ ACM Pipe



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
43	31/5/2021

Direction Photo Taken:
South East

Description:
Unconnected ACM Pipe adjacent to access path



Photo No.	Date:
44	31/5/2021

Direction Photo Taken:
North West

Description:
Unconnected ACM Pipe adjacent to access path



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
45	31/5/2021

Direction Photo Taken:
South East

Description:
Water Tank Pipe Removal Location



Photo No.	Date:
46	31/5/2021

Direction Photo Taken:
South East

Description:
Water Tank Pipe Removal Location



PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.:
NSW Department of Planning, Industry and Environment – Crown Lands	Dargan Creek Reserve	0601389

Photo No.	Date:
47	31/5/2021

Direction Photo Taken:
North

Description:
Water Tank connected ACM Pipe



Photo No.	Date:
48	31/5/2021

Direction Photo Taken:
North

Description:
Water Tank ex-Situ ACM pipe



APPENDIX E CALIBRATION RECORDS

Gas Calibration Certificate

Instrument GFM430
Serial No. 10479
Sensors CH_4, CO_2, O_2, H_2S, LEL

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	CH_4	✓	
	CO_2	✓	
	O_2	✓	
	H_2S	✓	
	LEL	✓	
	CO	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version		
Datalogger	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
O2		20.9%		Fresh Air	21.0%
CO2		40% Vol CO2	NATA	SY400	39.6% CO2
CH4		60% Vol CH4	NATA	SY400	59.6% CH4

Calibrated by: **Sarah Lian**

Calibration date: **9/07/2021**

Next calibration due: **8/01/2022**

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicorn	**Project Staff :**	MM
Project No :		**Date :**	24/6/21

Photo-ionisation Detector

Make/Model No:	Pro check Tiger
Serial Number:	T-108865

Calibration Gas

Calibration Gas:	Isobutylene

PID Calibration

Zero Calibration

PID Reading:	0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	101.5

Certification

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

Checked By:		M. Mercer			
Signature:				Date:	24/6/21

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Gas Calibration Certificate

Instrument GA5000
Serial No. G506041
Sensors CH4, CO2, O2, CO, H2S

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	O2	✓	
	CH4	✓	
	CO2	✓	
	CO	✓	
	H2S	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version		
Datalogger	Operation		
Download	Operation		
Other tests:			

Certificate of Calibration

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

Diffusion mode	Aspirated mode				
Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
O2		20.9% Vol O2	NATA	Fresh Air	20.9% O2
CH4		60% CH4	NATA	SY400	59.9%CH4
CO2		40% CO2	NATA	SY400	40.0% CO2
CO		103ppm CO	NATA	SY396	101ppm CO
H2S		24ppm H2S	NATA	SY396	23ppm H2S

Calibrated by: Sarah Lian

Calibration date: 17/06/2021

Next calibration due: 14/12/2021

Multi Parameter Water Meter

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Instrument **YSI Quatro Pro Plus**
Serial No. **12D100011**

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

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		364212	pH 7.04
2. pH 4.00		pH 4.00		368314	pH 4.08
3. pH 10.00		pH 10.00		370064	pH 9.84
3. mV		240.6mV		365755/364219	240.3mV
4. EC		2.76mS		350510	2.74mS
6. D.O		0.00 ppm		10959	0.00ppm
7. Temp		17.9°C		MultiTherm	17.5°C

Calibrated by: **Lauren Tompkins**

Calibration date: **21/06/2021**

Next calibration due: **22/07/2021**

PID Calibration Certificate

Instrument **PhoCheck Tiger**
Serial No. **T-105759**

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	✓	10.6eV			
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		93ppm Isobutylene	NATA	SY361		91.7 ppm

Calibrated by: **Lauren Tompkins**

Calibration date: **21/06/2021**

Next calibration due: **18/12/2021**

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicocn	**Project Staff :**	AR/MM
Project No :		**Date :**	22/6/21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T-105759

Calibration Gas

Calibration Gas:	ISO-B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	99.8

Certification

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

Checked By:	ANT R			
Signature:		R	Date:	22/6/16

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicorn	**Project Staff :**	AR
Project No :		**Date :**	23/6/21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T-105759

Calibration Gas

Calibration Gas:	Iso B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100
Actual PID Reading:	99.8

Certification

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

Checked By:	ANT R

Signature:			Date:	23/6/21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicorn	**Project Staff :**	AR MM
Project No :		**Date :**	24/6/21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T 105759

Calibration Gas

Calibration Gas:	150 B

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:	Ant R

Signature:		R	Date:	24/6/21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicorn	**Project Staff :**	AR
Project No :		**Date :**	28/6/21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T105759

Calibration Gas

Calibration Gas:	150 B

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:	Ant R

Signature:			Date:	28/6/21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	Unicorn	**Project Staff :**	AR
Project No :	[illegible]	**Date :**	29/6/21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T105759

Calibration Gas

Calibration Gas:	ISO B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	100.0

Certification

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

Checked By:	Amit R

Signature:		AR	Date:	29/6/21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	UNICORN	**Project Staff :**	AR
Project No :		**Date :**	30-6-21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T-105259

Calibration Gas

Calibration Gas:	ISO B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	99.8

Certification

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

Checked By:	ANT R

Signature:			Date:	30/6/21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	UNICORN	**Project Staff :**	AR
Project No :		**Date :**	1-7-21

Photo-ionisation Detector

Make/Model No:	TIGER
Serial Number:	T-105759

Calibration Gas

Calibration Gas:	150 B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	99.8

Certification

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

Checked By:	ANT R

Signature:		AR	Date:	1-7-21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	VNICORN	**Project Staff :**	AR
Project No :		**Date :**	2-7-21

Photo-ionisation Detector

Make/Model No:	T 105759
Serial Number:	TIGER

Calibration Gas

Calibration Gas:	150 B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	100.0

Certification

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

Checked By:	ANT R

Signature:			Date: 2-7-21

ERM

Environmental Resources Management Australia Pty Ltd

PID Calibration Certificate

Project Name :	UNICORN	**Project Staff :**	AR
Project No :		**Date :**	5-7-21

Photo-ionisation Detector

Make/Model No:	T 105 759
Serial Number:	TIGER

Calibration Gas

Calibration Gas:	130 B

PID Calibration

Zero Calibration

PID Reading:	0.0

Span Calibration

Desired PID Reading:	100.0
Actual PID Reading:	99.9

Certification

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

Checked By:	ANT R

Signature:		AR	Date:	5-7-21

14/7/21

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **13D100015**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

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

Certificate of Calibration

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

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
pH 10		pH 10.0		370064	pH 9.97
1. pH 7.00		pH 7.00		364212	pH 7.05
2. pH 4.00		pH 4.00		368314	pH 4.07
3. mV		238.4mV		370499/364219	238.3mV
4. EC		2.76mS		350510	2.76mS
5. D.O		0.00ppm		10959	0.01ppm
6. Temp		17.9°C		MultiTherm	18.1°C

Calibrated by: **Eloise Carroll**

Calibration date: **14/07/2021**

Next calibration due: **13/08/2021**

APPENDIX F LABORATORY CERTIFICATES

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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

Unit 1, 21 Smallwood Pl., Murarrie, QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

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

2 Kingston Town Close, Oakleigh, VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	ERM	Project №		Project Manager	Ian Batterley
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name	UNICORN	EDD Format (ESdat, EQuIS, Custom)	Esdat/ EQUIS
Contact Name	Michael Mercer				
Phone №	439623103				
Special Directions					
Purchase Order					
Quote ID №	210615ERMN				

Sampler(s)	Michael Mercer
Handed over by	Michael Mercer
Email for Invoice	Ian.batterley@erm.com
Email for Results	Ian.batterley@erm.com and michael.mercer@erm.com and anthony.richard@erm.com

Analyses (Note: Where metals are required, please specify "total" or "filtered". Surcharges may apply to filtered samples.)

Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	B7A	SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	+- ACM	Containers: 1L 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
MW01	23/06/21	W		X	X		X	X														
MW02	23/06/21	W		X	X		X	X														
MW05	23/06/21	W		X	X		X	X														
BH13	24/06/21	W		X	X		X	X														
X2	23/06/21	W		X	X		X	X														
X4	23/06/21	W		X	X		X	X														
X5	23/06/21	W		X	X		X	X														
X7	23/06/21	W		X	X		X	X														
X8	23/06/21	W		X	X		X	X														
D01_210623	23/06/21	W			X		X															
T01_210623	23/06/21	W			X		X															FORWARD TO ALS (DUP)
R01_210623	23/06/21	W		X	X		X															
TS	24/06/21	W										X										
TB	24/06/21	W									X											
TS	24/06/21	S										X										

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 ( )

NC 28/6/21 10:33AM 8.4°C 806169

TP210_1.4	23/06/21	S		X		X	X	X	X																					
TP210_1.8	23/06/21	S		X		X	X	X	X																					
TP211_0.5	23/06/21	S		X		X	X	X	X																					
TP211_1.0	23/06/21	S		X		X	X	X	X																					
TP212_0.7	23/06/21	S		X		X	X	X	X																					
TP212_1.8	23/06/21	S		X		X	X	X	X																					
TP213_0.6	23/06/21	S		X		X	X	X	X																					
TP213_1.0	23/06/21	S	X																											
TP213_1.5	23/06/21	S		X		X	X	X	X																					
TP214_0.8	22/06/21	S		X		X	X	X	X																					
TP214_1.2	22/06/21	S		X		X	X	X	X																					
TP214_ACM	22/06/21	S											X																	
TP221_0.2	24/06/21	S		X		X	X	X	X																					
TP221_1.0	24/06/21	S		X		X	X	X	X																					
TP224_0.5	24/06/21	S		X		X	X	X	X																					
TP224_1.5	24/06/21	S		X		X	X	X	X																					
TP232_0.5	24/06/21	S		X		X	X	X	X																					
TP232_1.2	24/06/21	S		X		X	X	X	X																					
Dup01_210622	22/06/21	S		X		X	X	X																						
Trip01_210622	22/06/21	S		X		X	X	X																						FORWARD TO ALS (DUP)
Dup02_210623	23/06/21	S		X		X	X	X																						
Trip02_210623	23/06/21	S		X		X	X	X																						FORWARD TO ALS (DUP)
Dup03_210624	24/06/21	S		X		X	X	X																						
Trip_210624	24/06/21	S		X		X	X	X																						FORWARD TO ALS (DUP)
SP236_0.4	22/06/21	S		X		X	X	X	X																					
SP237_0.7	22/06/21	S		X		X	X	X	X																					

NC 28/6/21 10:33 AM 8.4°C 806169

SP237_ACM	22/06/21	s											X																			
SP238_0.7	22/06/21	s		X		X	X	X	X																							
SP239_0.7	22/06/21	s		X		X	X	X	X																							
Total Counts			1	#	#		#	#	#		#	#	#																			

Method of Shipment	Courier (#)	Hand Delivered	Postal		Name	michael mercer	Signature																										
Eurofins | mgt Laboratory Use Only	Received By	NC	SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature		Date	25/6/21	Time	10:32	Temperature	8.4																				
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature		Date	__/__/__	Time	__:__	Report №	806163																				

ission 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.

ofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

eurofins | Environment Testing

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

Australia

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

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
46-48 Banksia Road
Welshpool WA 6106
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
NATA # 1261 Site # 25079

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

Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Ian Batterley
Project name:	UNICORN
Project ID:	Not provided
Turnaround time:	5 Day
Date/Time received	Jun 28, 2021 10:33 AM
Eurofins reference	806169

Sample Information

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

Notes

T01_210623, TRIP01_210623, TRIP02_210623 and TRIP_210624 forwarded to ALS.

Contact

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

Elvis Dsouza on phone : or by email: ElvisDsouza@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.

Global Leader - Results you can trust

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Address: Level 1 / 45 Watt Street
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NSW 2300

Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 2, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	MW01	Jun 23, 2021		Water	S21-Jn54164			X			X			X	X	
2	MW02	Jun 23, 2021		Water	S21-Jn54165			X			X			X	X	
3	MW05	Jun 23, 2021		Water	S21-Jn54166			X			X			X	X	
4	BH13	Jun 24, 2021		Water	S21-Jn54167			X			X			X	X	
5	X2	Jun 23, 2021		Water	S21-Jn54168			X			X			X	X	
6	X4	Jun 23, 2021		Water	S21-Jn54169			X			X			X	X	
7	X5	Jun 23, 2021		Water	S21-Jn54170			X			X			X	X	
8	X7	Jun 23, 2021		Water	S21-Jn54171			X			X			X	X	
9	X8	Jun 23, 2021		Water	S21-Jn54172			X			X			X	X	
10	D01_210623	Jun 23, 2021		Water	S21-Jn54173						X			X		

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
11	R01_210623	Jun 23, 2021		Water	S21-Jn54174						X			X	X	
12	TS	Jun 24, 2021		Water	S21-Jn54175											X
13	TB	Jun 24, 2021		Water	S21-Jn54176								X			
14	TS	Jun 24, 2021		Soil	S21-Jn54177											X
15	TB	Jun 24, 2021		Soil	S21-Jn54178								X			
16	TP210_1.4	Jun 23, 2021		Soil	S21-Jn54179	X		X		X		X		X	X	
17	TP210_1.8	Jun 23, 2021		Soil	S21-Jn54180	X		X		X		X		X	X	
18	TP211_0.5	Jun 23, 2021		Soil	S21-Jn54181	X		X		X		X		X	X	
19	TP211_1.0	Jun 23, 2021		Soil	S21-Jn54182	X		X		X		X		X	X	
20	TP212_0.7	Jun 23, 2021		Soil	S21-Jn54183	X		X		X		X		X	X	
21	TP212_1.8	Jun 23, 2021		Soil	S21-Jn54184	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
22	TP213_0.6	Jun 23, 2021		Soil	S21-Jn54185	X		X		X		X		X	X	
23	TP213_1.5	Jun 23, 2021		Soil	S21-Jn54186	X		X		X		X		X	X	
24	TP214_0.8	Jun 22, 2021		Soil	S21-Jn54187	X		X		X		X		X	X	
25	TP214_1.2	Jun 22, 2021		Soil	S21-Jn54188	X		X		X		X		X	X	
26	TP214_ACM	Jun 22, 2021		Building Materials	S21-Jn54189		X									
27	TP221_0.2	Jun 24, 2021		Soil	S21-Jn54190	X		X		X		X		X	X	
28	TP221_1.0	Jun 24, 2021		Soil	S21-Jn54191	X		X		X		X		X	X	
29	TP224_0.5	Jun 24, 2021		Soil	S21-Jn54192	X		X		X		X		X	X	
30	TP224_1.5	Jun 24, 2021		Soil	S21-Jn54193	X		X		X		X		X	X	
31	TP232_0.5	Jun 24, 2021		Soil	S21-Jn54194	X		X		X		X		X	X	
32	TP232_1.2	Jun 24, 2021		Soil	S21-Jn54195	X		X		X		X		X	X	

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Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
33	Dup01_210622	Jun 22, 2021		Soil	S21-Jn54196			X		X		X		X	X	
34	Dup02_210623	Jun 23, 2021		Soil	S21-Jn54197			X		X		X		X	X	
35	Dup03_210624	Jun 24, 2021		Soil	S21-Jn54198			X		X		X		X	X	
36	SP236_0.4	Jun 22, 2021		Soil	S21-Jn54199	X		X		X		X		X	X	
37	SP237_0.7	Jun 22, 2021		Soil	S21-Jn54200	X		X		X		X		X	X	
38	SP237_ACM	Jun 22, 2021		Building Materials	S21-Jn54201		X									
39	SP238_0.7	Jun 22, 2021		Soil	S21-Jn54202	X		X		X		X		X	X	
40	SP239_0.7	Jun 22, 2021		Soil	S21-Jn54203	X		X		X		X		X	X	
41	TP213_1.0	Jun 23, 2021		Soil	S21-Jn54204				X							

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Received: Jun 28, 2021 10:33 AM
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Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
Test Counts	20	2	32	1	23	11	23	2	34	33	2

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Site Number 18217

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

Attention:	Ian Batterley
Report	806169-AID
Project Name	UNICORN
Received Date	Jun 28, 2021
Date Reported	Jul 05, 2021

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.*

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Project Name UNICORN
Project ID
Date Sampled Jun 22, 2021 to Jun 24, 2021
Report 806169-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP210_1.4	21-Jn54179	Jun 23, 2021	Approximate Sample 578g Sample consisted of: Brown coarse-grained sandy soil, glass, coal and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP210_1.8	21-Jn54180	Jun 23, 2021	Approximate Sample 527g Sample consisted of: Brown coarse-grained sandy soil, glass, brick and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP211_0.5	21-Jn54181	Jun 23, 2021	Approximate Sample 589g Sample consisted of: Brown coarse-grained sandy soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP211_1.0	21-Jn54182	Jun 23, 2021	Approximate Sample 586g Sample consisted of: Brown coarse-grained sandy soil, cement, corroded metal and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP212_0.7	21-Jn54183	Jun 23, 2021	Approximate Sample 549g 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.
TP212_1.8	21-Jn54184	Jun 23, 2021	Approximate Sample 321g 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.
TP213_0.6	21-Jn54185	Jun 23, 2021	Approximate Sample 387g Sample consisted of: Brown coarse-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP213_1.5	21-Jn54186	Jun 23, 2021	Approximate Sample 357g Sample consisted of: Brown fine-grained clayey soil and rocks	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
TP214_0.8	21-Jn54187	Jun 22, 2021	Approximate Sample 717g Sample consisted of: Brown coarse-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP214_1.2	21-Jn54188	Jun 22, 2021	Approximate Sample 622g Sample consisted of: Brown coarse-grained sandy soil, compressed fibrous material and rocks.	Chrysotile asbestos detected in fibro-bituminous material. Approximate raw weight of asbestos containing material = 2.2g Total estimated asbestos content in the sample = 0.11g* Total estimated asbestos concentration = 0.017% w/w* Organic fibre detected. No trace asbestos detected.
TP214_ACM	21-Jn54189	Jun 22, 2021	Approximate Sample 320g / 230x80x10mm Sample consisted of: Grey compressed fibre cement	Chrysotile, amosite and crocidolite asbestos detected.
TP221_0.2	21-Jn54190	Jun 24, 2021	Approximate Sample 600g Sample consisted of: Brown coarse-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP221_1.0	21-Jn54191	Jun 24, 2021	Approximate Sample 624g 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.
TP224_0.5	21-Jn54192	Jun 24, 2021	Approximate Sample 807g Sample consisted of: Brown coarse-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP224_1.5	21-Jn54193	Jun 24, 2021	Approximate Sample 418g Sample consisted of: Brown coarse-grained sandy soil, corroded metal and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP232_0.5	21-Jn54194	Jun 24, 2021	Approximate Sample 480g Sample consisted of: Brown coarse-grained sandy soil, cement, bitumen, brick and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP232_1.2	21-Jn54195	Jun 24, 2021	Approximate Sample 622g Sample consisted of: Brown coarse-grained sandy soil, glass, corroded metal and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SP236_0.4	21-Jn54199	Jun 22, 2021	Approximate Sample 614g Sample consisted of: Brown coarse-grained sandy soil, glass, corroded metal, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SP237_0.7	21-Jn54200	Jun 22, 2021	Approximate Sample 621g Sample consisted of: Brown coarse-grained sandy soil, glass, cement and rocks	Chrysotile asbestos detected in weathered fibre cement fragment. Approximate raw weight of asbestos containing material = 0.021g Total estimated asbestos content in the sample = 0.0021g* Total estimated asbestos concentration = 0.00034% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SP237_ACM	21-Jn54201	Jun 22, 2021	Approximate Sample 59g / 90x50x5mm Sample consisted of: Grey fibre cement material	Chrysotile and amosite asbestos detected.
SP238_0.7	21-Jn54202	Jun 22, 2021	Approximate Sample 619g Sample consisted of: Brown coarse-grained sandy soil, cement, glass and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SP239_0.7	21-Jn54203	Jun 22, 2021	Approximate Sample 538g Sample consisted of: Brown coarse-grained sandy soil, cement, glass 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 is reported.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jun 28, 2021	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jun 28, 2021	Indefinite

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IANZ # 1290

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

Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 5, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	MW01	Jun 23, 2021		Water	S21-Jn54164			X			X			X	X	
2	MW02	Jun 23, 2021		Water	S21-Jn54165			X			X			X	X	
3	MW05	Jun 23, 2021		Water	S21-Jn54166			X			X			X	X	
4	BH13	Jun 24, 2021		Water	S21-Jn54167			X			X			X	X	
5	X2	Jun 23, 2021		Water	S21-Jn54168			X			X			X	X	
6	X4	Jun 23, 2021		Water	S21-Jn54169			X			X			X	X	
7	X5	Jun 23, 2021		Water	S21-Jn54170			X			X			X	X	
8	X7	Jun 23, 2021		Water	S21-Jn54171			X			X			X	X	
9	X8	Jun 23, 2021		Water	S21-Jn54172			X			X			X	X	
10	D01_210623	Jun 23, 2021		Water	S21-Jn54173						X			X		

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Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
11	R01_210623	Jun 23, 2021		Water	S21-Jn54174						X			X	X	
12	TS	Jun 24, 2021		Water	S21-Jn54175											X
13	TB	Jun 24, 2021		Water	S21-Jn54176								X			
14	TS	Jun 24, 2021		Soil	S21-Jn54177											X
15	TB	Jun 24, 2021		Soil	S21-Jn54178								X			
16	TP210_1.4	Jun 23, 2021		Soil	S21-Jn54179	X		X		X		X		X	X	
17	TP210_1.8	Jun 23, 2021		Soil	S21-Jn54180	X		X		X		X		X	X	
18	TP211_0.5	Jun 23, 2021		Soil	S21-Jn54181	X		X		X		X		X	X	
19	TP211_1.0	Jun 23, 2021		Soil	S21-Jn54182	X		X		X		X		X	X	
20	TP212_0.7	Jun 23, 2021		Soil	S21-Jn54183	X		X		X		X		X	X	
21	TP212_1.8	Jun 23, 2021		Soil	S21-Jn54184	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
22	TP213_0.6	Jun 23, 2021		Soil	S21-Jn54185	X		X		X		X		X	X	
23	TP213_1.5	Jun 23, 2021		Soil	S21-Jn54186	X		X		X		X		X	X	
24	TP214_0.8	Jun 22, 2021		Soil	S21-Jn54187	X		X		X		X		X	X	
25	TP214_1.2	Jun 22, 2021		Soil	S21-Jn54188	X		X		X		X		X	X	
26	TP214_ACM	Jun 22, 2021		Building Materials	S21-Jn54189		X									
27	TP221_0.2	Jun 24, 2021		Soil	S21-Jn54190	X		X		X		X		X	X	
28	TP221_1.0	Jun 24, 2021		Soil	S21-Jn54191	X		X		X		X		X	X	
29	TP224_0.5	Jun 24, 2021		Soil	S21-Jn54192	X		X		X		X		X	X	
30	TP224_1.5	Jun 24, 2021		Soil	S21-Jn54193	X		X		X		X		X	X	
31	TP232_0.5	Jun 24, 2021		Soil	S21-Jn54194	X		X		X		X		X	X	
32	TP232_1.2	Jun 24, 2021		Soil	S21-Jn54195	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
33	Dup01_210622	Jun 22, 2021		Soil	S21-Jn54196			X		X		X		X	X	
34	Dup02_210623	Jun 23, 2021		Soil	S21-Jn54197			X		X		X		X	X	
35	Dup03_210624	Jun 24, 2021		Soil	S21-Jn54198			X		X		X		X	X	
36	SP236_0.4	Jun 22, 2021		Soil	S21-Jn54199	X		X		X		X		X	X	
37	SP237_0.7	Jun 22, 2021		Soil	S21-Jn54200	X		X		X		X		X	X	
38	SP237_ACM	Jun 22, 2021		Building Materials	S21-Jn54201		X									
39	SP238_0.7	Jun 22, 2021		Soil	S21-Jn54202	X		X		X		X		X	X	
40	SP239_0.7	Jun 22, 2021		Soil	S21-Jn54203	X		X		X		X		X	X	
41	TP213_1.0	Jun 23, 2021		Soil	S21-Jn54204				X							

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Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
Test Counts	20	2	32	1	23	11	23	2	34	33	2

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	No
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.

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.

ERM Hunter Valley
Level 1 / 45 Watt Street
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NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention: **Ian Batterley**

Report **806169-S**
Project name UNICORN
Received Date Jun 28, 2021

Client Sample ID			**TS**	**TB**	**TP210_1.4**	**TP210_1.8**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Jn54177**	**S21-Jn54178**	**S21-Jn54179**	**S21-Jn54180**
Date Sampled			**Jun 24, 2021**	**Jun 24, 2021**	**Jun 23, 2021**	**Jun 23, 2021**
Test/Reference	LOR	Unit				
BTEX						
Benzene	1	%	99	-	-	-
Ethylbenzene	1	%	92	-	-	-
m&p-Xylenes	1	%	93	-	-	-
o-Xylene	1	%	95	-	-	-
Toluene	1	%	95	-	-	-
Xylenes - Total	1	%	94	-	-	-
4-Bromofluorobenzene (surr.)	1	%	108	-	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	79	< 50
TRH C29-C36	50	mg/kg	-	-	61	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	140	< 50
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	-	-	110	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	110	< 100
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	%	-	126	91	89
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

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
Vic EPA IWRG 621 Other CHC (Total)*	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Bromofluorobenzene (surr.)	1	%	-	-	91	89
Toluene-d8 (surr.)	1	%	-	-	76	81
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	%	-	-	113	112
p-Terphenyl-d14 (surr.)	1	%	-	-	106	114
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	-	101	115
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	-	-	< 1	< 1
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-Fluorobiphenyl (surr.)	1	%	-	-	113	112
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	-	-	< 1	< 1
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-Tribromophenol (surr.)	1	%	-	-	INT	96
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	-	-	< 1	< 1
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	-	-	< 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

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	-	-	84	110
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
Phenol-d6 (surr.)	1	%	-	-	101	115
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
Chromium (hexavalent)	1	mg/kg	-	-	< 1	< 10
% Moisture	1	%	-	-	14	26
Heavy Metals						
Arsenic	2	mg/kg	-	-	4.0	8.7
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	7.1	16
Copper	5	mg/kg	-	-	55	25
Lead	5	mg/kg	-	-	59	130
Mercury	0.1	mg/kg	-	-	0.1	0.7
Nickel	5	mg/kg	-	-	8.0	< 5
Zinc	5	mg/kg	-	-	100	130
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	%	-	-	93	80
13C5-PFPeA (surr.)	1	%	-	-	96	113
13C5-PFHxA (surr.)	1	%	-	-	93	90
13C4-PFHpA (surr.)	1	%	-	-	96	88
13C8-PFOA (surr.)	1	%	-	-	99	86
13C5-PFNA (surr.)	1	%	-	-	110	91
13C6-PFDA (surr.)	1	%	-	-	125	122
13C2-PFUnDA (surr.)	1	%	-	-	112	115
13C2-PFDoDA (surr.)	1	%	-	-	124	123
13C2-PFTeDA (surr.)	1	%	-	-	134	119

Client Sample ID			TS	TB	TP210_1.4	TP210_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54177	S21-Jn54178	S21-Jn54179	S21-Jn54180
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 23, 2021	Jun 23, 2021
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	%	-	-	100	91
D3-N-MeFOSA (surr.)	1	%	-	-	87	84
D5-N-EtFOSA (surr.)	1	%	-	-	90	85
D7-N-MeFOSE (surr.)	1	%	-	-	92	76
D9-N-EtFOSE (surr.)	1	%	-	-	91	87
D5-N-EtFOSAA (surr.)	1	%	-	-	121	90
D3-N-MeFOSAA (surr.)	1	%	-	-	107	83
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	-	-	< 5	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	-	-	< 5	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	-	-	< 5	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	-	-	< 5	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	-	-	< 5	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	-	-	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	-	-	< 5	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	-	-	< 5	< 5
13C3-PFBS (surr.)	1	%	-	-	88	75
18O2-PFHxS (surr.)	1	%	-	-	92	85
13C8-PFOS (surr.)	1	%	-	-	93	87
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 FTS (surr.)	1	%	-	-	119	130
13C2-6:2 FTSA (surr.)	1	%	-	-	106	115
13C2-8:2 FTSA (surr.)	1	%	-	-	147	125
13C2-10:2 FTSA (surr.)	1	%	-	-	107	95
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	-	-	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	-	-	< 50	< 50

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	85
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	85
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	120
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	120
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	%	97	83	93	92
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
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

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	97	83	93	92
Toluene-d8 (surr.)	1	%	75	78	85	82
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.5
2-Fluorobiphenyl (surr.)	1	%	103	109	105	113
p-Terphenyl-d14 (surr.)	1	%	100	111	107	108
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
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	103	114	109	104
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
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-Fluorobiphenyl (surr.)	1	%	103	109	105	113
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	92	92	64	78
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	< 1	< 1	< 1	< 1
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

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
Nitrobenzene-d5 (surr.)	1	%	104	112	109	103
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
Phenol-d6 (surr.)	1	%	103	114	109	104
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
Chromium (hexavalent)	1	mg/kg	< 5	< 10	< 1	< 1
% Moisture	1	%	13	16	12	32
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	5.0	4.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	7.5	< 5
Copper	5	mg/kg	< 5	12	17	18
Lead	5	mg/kg	5.4	68	41	83

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	0.1	0.2	0.6
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	49	160	53	90
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	%	80	81	73	69
13C5-PFPeA (surr.)	1	%	113	126	91	91
13C5-PFHxA (surr.)	1	%	94	90	83	78
13C4-PFHpA (surr.)	1	%	91	90	76	80
13C8-PFOA (surr.)	1	%	85	89	75	82
13C5-PFNA (surr.)	1	%	94	96	86	91
13C6-PFDA (surr.)	1	%	127	127	106	87
13C2-PFUnDA (surr.)	1	%	129	129	116	102
13C2-PFDoDA (surr.)	1	%	130	131	112	101
13C2-PFTeDA (surr.)	1	%	128	127	119	106
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	%	95	92	82	70
D3-N-MeFOSA (surr.)	1	%	90	90	83	72
D5-N-EtFOSA (surr.)	1	%	95	89	81	68
D7-N-MeFOSE (surr.)	1	%	89	79	70	58
D9-N-EtFOSE (surr.)	1	%	84	89	81	64
D5-N-EtFOSAA (surr.)	1	%	97	95	84	73
D3-N-MeFOSAA (surr.)	1	%	99	92	78	72
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

Client Sample ID			TP211_0.5	TP211_1.0	TP212_0.7	TP212_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54181	S21-Jn54182	S21-Jn54183	S21-Jn54184
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	71	77	55	64
18O2-PFHxS (surr.)	1	%	84	87	62	68
13C8-PFOS (surr.)	1	%	88	88	80	68
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 FTS (surr.)	1	%	91	113	95	158
13C2-6:2 FTSA (surr.)	1	%	102	128	86	153
13C2-8:2 FTSA (surr.)	1	%	109	112	100	129
13C2-10:2 FTSA (surr.)	1	%	102	90	82	87
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			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	43	< 20	< 20	45
TRH C15-C28	50	mg/kg	100	410	780	670
TRH C29-C36	50	mg/kg	170	230	350	330
TRH C10-C36 (Total)	50	mg/kg	313	640	1130	1045
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	75
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	75
TRH >C16-C34	100	mg/kg	210	540	1200	860
TRH >C34-C40	100	mg/kg	160	120	220	170
TRH >C10-C40 (total)*	100	mg/kg	370	660	1420	1105

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
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	%	116	104	109	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
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

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	116	104	109	103
Toluene-d8 (surr.)	1	%	99	94	96	90
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	13	25	3.6
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	13	25	3.9
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	13	25	4.1
Acenaphthene	0.5	mg/kg	< 0.5	2.2	3.1	1.6
Acenaphthylene	0.5	mg/kg	< 0.5	2.4	4.0	0.8
Anthracene	0.5	mg/kg	< 0.5	4.9	12	1.7
Benz(a)anthracene	0.5	mg/kg	< 0.5	12	21	4.0
Benzo(a)pyrene	0.5	mg/kg	< 0.5	8.2	17	2.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	5.5	11	1.1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	6.4	9.3	1.2
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	12	15	4.5
Chrysene	0.5	mg/kg	< 0.5	13	22	4.0
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	1.6	2.6	< 0.5
Fluoranthene	0.5	mg/kg	0.5	27	54	8.0
Fluorene	0.5	mg/kg	< 0.5	2.2	4.7	0.6
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	4.1	6.8	1.2
Naphthalene	0.5	mg/kg	< 0.5	0.7	1.4	0.5
Phenanthrene	0.5	mg/kg	< 0.5	19	39	5.1
Pyrene	0.5	mg/kg	0.7	27	51	8.3
Total PAH*	0.5	mg/kg	1.2	148.2	273.9	45.1
2-Fluorobiphenyl (surr.)	1	%	109	115	114	109
p-Terphenyl-d14 (surr.)	1	%	80	99	103	115
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			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 1	< 1	< 1	< 1
Total cresols*	0.5	mg/kg	< 1	< 1	< 1	< 1
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
Phenol-d6 (surr.)	1	%	92	104	91	92
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	13	25	3.6
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	13	25	3.9
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	13	25	4.1
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2.3-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2.4-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.3.5-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	109	115	114	109
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2-Picoline	0.5	mg/kg	< 1	< 1	< 1	< 1
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 1	< 1	< 1	< 1
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	< 1	< 1	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	INT
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	< 1	< 1	< 1	< 1

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3-Methylcholanthrene	0.5	mg/kg	< 1	< 1	< 1	< 1
3.3'-Dichlorobenzidine	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Aminobiphenyl	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 1	< 1	< 1	< 1
4.4'-DDE	0.5	mg/kg	< 1	< 1	< 1	< 1
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	< 1	< 1	< 1	< 1
Acenaphthene	0.5	mg/kg	< 0.5	2.2	3.1	1.6
Acenaphthylene	0.5	mg/kg	< 0.5	2.4	4.0	0.8
Acetophenone	0.5	mg/kg	< 1	< 1	< 1	< 1
Aldrin	0.5	mg/kg	< 1	< 1	< 1	< 1
Aniline	0.5	mg/kg	< 1	< 1	< 1	< 1
Anthracene	0.5	mg/kg	< 0.5	4.9	12	1.7
b-BHC	0.5	mg/kg	< 1	< 1	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 0.5	12	21	4.0
Benzo(a)pyrene	0.5	mg/kg	< 0.5	8.2	17	2.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	5.5	11	1.1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	6.4	9.3	1.2
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	12	15	4.5
Benzyl chloride	0.5	mg/kg	< 1	< 1	< 1	< 1
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 1	< 1	< 1	< 1
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 1	< 1	< 1	< 1
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 1	< 1	< 1	< 1
Chrysene	0.5	mg/kg	< 0.5	13	22	4.0
d-BHC	0.5	mg/kg	< 1	< 1	< 1	< 1
Di-n-butyl phthalate	0.5	mg/kg	< 1	< 1	< 1	< 1
Di-n-octyl phthalate	0.5	mg/kg	< 1	< 1	< 1	< 1
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	1.6	2.6	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 1	< 1	< 2	< 1
Dibenzofuran	0.5	mg/kg	< 1	< 2	1.2	< 1
Dieldrin	0.5	mg/kg	< 1	< 1	< 1	< 1
Diethyl phthalate	0.5	mg/kg	< 1	< 1	< 1	< 1
Dimethyl phthalate	0.5	mg/kg	< 1	< 1	< 1	< 1
Dimethylaminoazobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
Diphenylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
Endosulfan I	0.5	mg/kg	< 1	< 1	< 1	< 1
Endosulfan II	0.5	mg/kg	< 1	< 1	< 1	< 1
Endosulfan sulphate	0.5	mg/kg	< 1	< 1	< 1	< 1
Endrin	0.5	mg/kg	< 1	< 1	< 1	< 1
Endrin aldehyde	0.5	mg/kg	< 1	< 1	< 1	< 1
Endrin ketone	0.5	mg/kg	< 1	< 1	< 1	< 1
Fluoranthene	0.5	mg/kg	0.5	27	54	8.0
Fluorene	0.5	mg/kg	< 0.5	2.2	4.7	0.6

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
g-BHC (Lindane)	0.5	mg/kg	< 1	< 1	< 1	< 1
Heptachlor	0.5	mg/kg	< 1	< 1	< 1	< 1
Heptachlor epoxide	0.5	mg/kg	< 1	< 1	< 1	< 1
Hexachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
Hexachlorobutadiene	0.5	mg/kg	< 1	< 1	< 1	< 1
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 1	< 1	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	4.1	6.8	1.2
Methoxychlor	0.5	mg/kg	< 1	< 1	< 1	< 1
N-Nitrosodibutylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
N-Nitrosodipropylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
N-Nitrosopiperidine	0.5	mg/kg	< 1	< 1	< 1	< 1
Naphthalene	0.5	mg/kg	< 0.5	0.7	1.4	0.5
Nitrobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
Nitrobenzene-d5 (surr.)	1	%	88	94	89	91
Pentachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
Pentachloronitrobenzene	0.5	mg/kg	< 1	< 1	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
Phenanthrene	0.5	mg/kg	< 0.5	19	39	5.1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	92	104	91	92
Pronamide	0.5	mg/kg	< 1	< 1	< 1	< 1
Pyrene	0.5	mg/kg	0.7	27	51	8.3
Trifluralin	0.5	mg/kg	< 1	< 1	< 1	< 1
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 5
% Moisture	1	%	7.8	20	12	19
Heavy Metals						
Arsenic	2	mg/kg	2.2	5.8	3.0	6.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.8
Chromium	5	mg/kg	31	12	5.7	24
Copper	5	mg/kg	29	17	17	36
Lead	5	mg/kg	19	37	35	83
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	0.6
Nickel	5	mg/kg	37	7.1	< 5	11
Zinc	5	mg/kg	68	19	33	81
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	%	85	72	73	85

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	133	105	104	95
13C5-PFHxA (surr.)	1	%	77	77	88	89
13C4-PFHpA (surr.)	1	%	89	72	90	92
13C8-PFOA (surr.)	1	%	95	71	89	98
13C5-PFNA (surr.)	1	%	96	80	103	104
13C6-PFDA (surr.)	1	%	133	115	112	112
13C2-PFUnDA (surr.)	1	%	129	113	108	113
13C2-PFDoDA (surr.)	1	%	135	115	112	108
13C2-PFTeDA (surr.)	1	%	144	114	134	118
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	%	92	80	87	84
D3-N-MeFOSA (surr.)	1	%	94	79	70	73
D5-N-EtFOSA (surr.)	1	%	94	83	73	78
D7-N-MeFOSE (surr.)	1	%	85	73	64	75
D9-N-EtFOSE (surr.)	1	%	96	77	69	73
D5-N-EtFOSAA (surr.)	1	%	106	48	98	108
D3-N-MeFOSAA (surr.)	1	%	101	29	84	94
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	%	80	62	60	80
18O2-PFHxS (surr.)	1	%	95	72	87	92
13C8-PFOS (surr.)	1	%	93	82	87	86
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 FTS (surr.)	1	%	133	89	114	185
13C2-6:2 FTSA (surr.)	1	%	127	71	149	167

Client Sample ID			TP213_0.6	TP213_1.5	TP214_0.8	TP214_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54185	S21-Jn54186	S21-Jn54187	S21-Jn54188
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-8:2 FTSA (surr.)	1	%	116	90	178	149
13C2-10:2 FTSA (surr.)	1	%	95	82	99	93
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			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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
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	%	97	90	117	94
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

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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	%	97	90	117	94
Toluene-d8 (surr.)	1	%	68	66	95	81

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
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	%	105	80	94	94
p-Terphenyl-d14 (surr.)	1	%	109	97	93	109
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
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	106	84	93	97
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
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-Fluorobiphenyl (surr.)	1	%	105	80	94	94
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	< 1	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	63	82	INT	97
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	< 1	< 1	< 1	< 1
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

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	112	84	90	98
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
Phenol-d6 (surr.)	1	%	106	84	93	97
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	6.9	8.7	6.7	18
Heavy Metals						
Arsenic	2	mg/kg	4.5	< 2	2.7	17
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	1.0
Chromium	5	mg/kg	17	< 5	< 5	28
Copper	5	mg/kg	23	< 5	47	210
Lead	5	mg/kg	9.4	13	62	450
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	21	< 5	< 5	46
Zinc	5	mg/kg	53	150	140	2100
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	%	93	92	84	61
13C5-PFPeA (surr.)	1	%	96	90	119	62
13C5-PFHxA (surr.)	1	%	97	91	99	71
13C4-PFHpA (surr.)	1	%	93	88	89	65
13C8-PFOA (surr.)	1	%	96	96	91	67
13C5-PFNA (surr.)	1	%	101	93	105	81
13C6-PFDA (surr.)	1	%	129	111	139	118
13C2-PFUnDA (surr.)	1	%	127	116	143	116
13C2-PFDoDA (surr.)	1	%	131	121	143	117
13C2-PFTeDA (surr.)	1	%	135	122	165	109

Client Sample ID			TP221_0.2	TP221_1.0	TP224_0.5	TP224_1.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54190	S21-Jn54191	S21-Jn54192	S21-Jn54193
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 24, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	98	97	110	89
D3-N-MeFOSA (surr.)	1	%	92	91	97	83
D5-N-EtFOSA (surr.)	1	%	97	97	103	92
D7-N-MeFOSE (surr.)	1	%	101	97	94	90
D9-N-EtFOSE (surr.)	1	%	92	89	98	89
D5-N-EtFOSAA (surr.)	1	%	119	103	110	96
D3-N-MeFOSAA (surr.)	1	%	111	106	107	90
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	%	91	93	78	67
18O2-PFHxS (surr.)	1	%	105	96	88	80
13C8-PFOS (surr.)	1	%	98	107	89	96
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 FTS (surr.)	1	%	104	72	109	26
13C2-6:2 FTSA (surr.)	1	%	112	97	109	31
13C2-8:2 FTSA (surr.)	1	%	125	111	149	50
13C2-10:2 FTSA (surr.)	1	%	108	96	106	83
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			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	65	62	< 50	< 50
TRH C29-C36	50	mg/kg	54	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	119	62	< 50	< 50
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
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	%	125	106	113	109
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
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

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	125	106	113	109
Toluene-d8 (surr.)	1	%	100	83	87	84
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	93	89	81
p-Terphenyl-d14 (surr.)	1	%	67	94	86	81
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
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.2	< 0.5	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 1	< 0.4	< 1	< 0.4
Total cresols*	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
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
Phenol-d6 (surr.)	1	%	66	91	87	74
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	81	93	89	81
2-Methylnaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.5	< 0.2	< 0.5	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 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	< 1	< 0.5	< 1	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 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	< 1	< 0.5	< 1	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	INT
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	< 1	< 0.4	< 1	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 1	< 1	< 1	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
4.4'-DDE	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
a-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 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	< 1	< 0.5	< 1	< 0.5
Aldrin	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Aniline	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
b-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 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	< 1	< 0.5	< 1	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Dibenzofuran	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Dieldrin	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Diethyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Diphenylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endosulfan I	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endosulfan II	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endrin	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endrin aldehyde	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Endrin ketone	0.5	mg/kg	< 1	< 0.5	< 1	< 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	< 1	< 0.5	< 1	< 0.5
Heptachlor	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 1	< 0.5	< 1	< 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	< 1	< 0.5	< 1	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Nitrobenzene-d5 (surr.)	1	%	77	89	85	94
Pentachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 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
Phenol-d6 (surr.)	1	%	66	91	87	74
Pronamide	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Pyrene	0.5	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Trifluralin	0.5	mg/kg	< 1	< 0.5	< 1	< 0.5
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 5	< 5
% Moisture	1	%	13	8.2	12	16
Heavy Metals						
Arsenic	2	mg/kg	5.0	4.0	3.6	4.1
Cadmium	0.4	mg/kg	< 0.4	0.5	< 0.4	< 0.4
Chromium	5	mg/kg	10	14	9.3	5.3
Copper	5	mg/kg	61	73	54	17
Lead	5	mg/kg	230	480	140	59

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	0.1	0.4	0.1	0.3
Nickel	5	mg/kg	11	16	8.8	< 5
Zinc	5	mg/kg	150	1200	300	67
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	%	84	92	80	78
13C5-PFPeA (surr.)	1	%	87	87	98	80
13C5-PFHxA (surr.)	1	%	89	86	100	80
13C4-PFHpA (surr.)	1	%	89	83	110	80
13C8-PFOA (surr.)	1	%	87	89	97	77
13C5-PFNA (surr.)	1	%	93	99	86	85
13C6-PFDA (surr.)	1	%	109	99	112	110
13C2-PFUnDA (surr.)	1	%	108	109	79	100
13C2-PFDoDA (surr.)	1	%	117	112	82	109
13C2-PFTeDA (surr.)	1	%	130	119	79	118
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	%	85	87	118	82
D3-N-MeFOSA (surr.)	1	%	79	83	72	75
D5-N-EtFOSA (surr.)	1	%	87	86	122	82
D7-N-MeFOSE (surr.)	1	%	86	82	121	81
D9-N-EtFOSE (surr.)	1	%	81	87	89	81
D5-N-EtFOSAA (surr.)	1	%	105	104	83	98
D3-N-MeFOSAA (surr.)	1	%	98	97	90	93
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

Client Sample ID			TP232_0.5	TP232_1.2	Dup01_210622	Dup02_210623
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54194	S21-Jn54195	S21-Jn54196	S21-Jn54197
Date Sampled			Jun 24, 2021	Jun 24, 2021	Jun 22, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	88	84	94	73
18O2-PFHxS (surr.)	1	%	93	90	89	76
13C8-PFOS (surr.)	1	%	90	92	82	88
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 FTS (surr.)	1	%	73	94	92	77
13C2-6:2 FTSA (surr.)	1	%	95	99	98	87
13C2-8:2 FTSA (surr.)	1	%	113	114	88	112
13C2-10:2 FTSA (surr.)	1	%	95	97	86	90
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			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	170	< 50	69
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	170	< 50	69
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	270	< 100	100
TRH >C34-C40	100	mg/kg	< 100	110	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	380	< 100	100

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
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	%	101	106	111	102
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
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

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	106	111	102
Toluene-d8 (surr.)	1	%	86	90	101	80
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	1.0	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.3	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.6	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	0.7	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.8	< 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	0.9	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.9	< 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	1.4	< 1	< 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	1.6	< 1	0.6
Total PAH*	0.5	mg/kg	< 0.5	7.3	< 1	0.6
2-Fluorobiphenyl (surr.)	1	%	106	82	76	83
p-Terphenyl-d14 (surr.)	1	%	104	73	71	67
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			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.5
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 1	< 0.4	< 1
Total cresols*	0.5	mg/kg	< 0.5	< 1	< 0.5	< 1
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
Phenol-d6 (surr.)	1	%	98	71	63	66
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	1.0	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.3	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.6	1.2	1.2
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	106	82	76	83
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.5	< 0.2	< 0.5
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
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	< 1	< 1	< 1
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 1
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	< 1	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4.6-Tribromophenol (surr.)	1	%	60	INT	INT	INT
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	< 1	< 0.4	< 1

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 1	< 1	< 1
4-Aminobiphenyl	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 1	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 1	< 1	< 1
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 1	< 1	< 1
4.4'-DDE	0.5	mg/kg	< 0.5	< 1	< 1	< 1
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
a-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 1
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	< 1	< 1	< 1
Aldrin	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Aniline	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
b-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.8	< 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	0.9	< 0.5	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Chrysene	0.5	mg/kg	< 0.5	0.9	< 0.5	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
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	< 1	< 1	< 1
Dibenzofuran	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Dieldrin	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Diethyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Diphenylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endosulfan I	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endosulfan II	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endrin	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endrin aldehyde	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Endrin ketone	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Fluoranthene	0.5	mg/kg	< 0.5	1.4	< 1	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Heptachlor	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 0.5	< 1	< 1	< 1
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	< 1	< 1	< 1
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 1
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 1
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Nitrobenzene-d5 (surr.)	1	%	101	72	92	72
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 1
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
Phenol-d6 (surr.)	1	%	98	71	63	66
Pronamide	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Pyrene	0.5	mg/kg	< 0.5	1.6	< 1	0.6
Trifluralin	0.5	mg/kg	< 0.5	< 1	< 1	< 1
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	5.9	12	16	13
Heavy Metals						
Arsenic	2	mg/kg	< 2	9.2	5.1	6.2
Cadmium	0.4	mg/kg	< 0.4	0.6	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	16	42	18
Copper	5	mg/kg	9.6	100	48	63
Lead	5	mg/kg	10.0	180	180	180
Mercury	0.1	mg/kg	< 0.1	0.2	0.3	0.6
Nickel	5	mg/kg	5.7	16	16	17
Zinc	5	mg/kg	180	1900	210	370
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	%	80	97	90	88

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	82	96	107	102
13C5-PFHxA (surr.)	1	%	86	98	107	106
13C4-PFHpA (surr.)	1	%	76	94	122	113
13C8-PFOA (surr.)	1	%	86	96	109	102
13C5-PFNA (surr.)	1	%	87	108	115	118
13C6-PFDA (surr.)	1	%	119	127	122	113
13C2-PFUnDA (surr.)	1	%	103	110	90	90
13C2-PFDoDA (surr.)	1	%	105	120	94	93
13C2-PFTeDA (surr.)	1	%	120	131	93	91
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	%	85	94	122	122
D3-N-MeFOSA (surr.)	1	%	75	89	92	88
D5-N-EtFOSA (surr.)	1	%	85	94	151	142
D7-N-MeFOSE (surr.)	1	%	88	94	141	132
D9-N-EtFOSE (surr.)	1	%	84	92	119	96
D5-N-EtFOSAA (surr.)	1	%	100	116	97	88
D3-N-MeFOSAA (surr.)	1	%	96	109	109	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	%	83	95	102	106
18O2-PFHxS (surr.)	1	%	80	91	96	102
13C8-PFOS (surr.)	1	%	90	105	115	97
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 FTS (surr.)	1	%	84	113	61	95
13C2-6:2 FTSA (surr.)	1	%	69	123	130	132

Client Sample ID			Dup03_210624	SP236_0.4	SP237_0.7	SP238_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jn54198	S21-Jn54199	S21-Jn54200	S21-Jn54202
Date Sampled			Jun 24, 2021	Jun 22, 2021	Jun 22, 2021	Jun 22, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-8:2 FTSA (surr.)	1	%	109	142	99	101
13C2-10:2 FTSA (surr.)	1	%	98	109	92	81
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			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
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
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	%	101
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

Client Sample ID			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
Test/Reference	LOR	Unit	
Volatile Organics			
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
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	%	101
Toluene-d8 (surr.)	1	%	97

Client Sample ID			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
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	%	92
p-Terphenyl-d14 (surr.)	1	%	92
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1	mg/kg	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	80
Total Non-Halogenated Phenol*	20	mg/kg	< 20

Client Sample ID			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5
1-Naphthylamine	0.5	mg/kg	< 1
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-Fluorobiphenyl (surr.)	1	%	92
2-Methylnaphthalene	0.5	mg/kg	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1
2-Nitroaniline	1	mg/kg	< 1
2-Nitrophenol	1	mg/kg	< 1
2-Picoline	0.5	mg/kg	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5
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-Tribromophenol (surr.)	1	%	INT
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1
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	< 1
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	1	mg/kg	< 1
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

Client Sample ID			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
Acetophenone	0.5	mg/kg	< 0.5
Aldrin	0.5	mg/kg	< 0.5
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	5	mg/kg	< 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	1	mg/kg	< 1
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

Client Sample ID			SP239_0.7
Sample Matrix			**Soil**
Eurofins Sample No.			**S21-Jn54203**
Date Sampled			**Jun 22, 2021**
Test/Reference	LOR	Unit	
Semivolatile Organics			
Nitrobenzene-d5 (surr.)	1	%	82
Pentachlorobenzene	0.5	mg/kg	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5
Pentachlorophenol	1	mg/kg	< 1
Phenanthrene	0.5	mg/kg	< 0.5
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	80
Pronamide	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Trifluralin	0.5	mg/kg	< 0.5
Chromium (hexavalent)	1	mg/kg	< 1
% Moisture	1	%	9.7
Heavy Metals			
Arsenic	2	mg/kg	4.9
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	13
Copper	5	mg/kg	55
Lead	5	mg/kg	170
Mercury	0.1	mg/kg	0.2
Nickel	5	mg/kg	18
Zinc	5	mg/kg	810
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	92
13C5-PFPeA (surr.)	1	%	112
13C5-PFHxA (surr.)	1	%	112
13C4-PFHpA (surr.)	1	%	121
13C8-PFOA (surr.)	1	%	121
13C5-PFNA (surr.)	1	%	117
13C6-PFDA (surr.)	1	%	130
13C2-PFUnDA (surr.)	1	%	106
13C2-PFDoDA (surr.)	1	%	102
13C2-PFTeDA (surr.)	1	%	98

Client Sample ID			SP239_0.7
Sample Matrix			Soil
Eurofins Sample No.			S21-Jn54203
Date Sampled			Jun 22, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	131
D3-N-MeFOSA (surr.)	1	%	95
D5-N-EtFOSA (surr.)	1	%	141
D7-N-MeFOSE (surr.)	1	%	144
D9-N-EtFOSE (surr.)	1	%	103
D5-N-EtFOSAA (surr.)	1	%	93
D3-N-MeFOSAA (surr.)	1	%	112
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	104
18O2-PFHxS (surr.)	1	%	108
13C8-PFOS (surr.)	1	%	76
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5
13C2-4:2 FTS (surr.)	1	%	115
13C2-6:2 FTSA (surr.)	1	%	110
13C2-8:2 FTSA (surr.)	1	%	124
13C2-10:2 FTSA (surr.)	1	%	107
PFASs Summations			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Chromium (hexavalent)	Sydney	Jun 29, 2021	28 Days
- Method: In-house method E057.2			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jun 29, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jun 29, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jun 29, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jun 29, 2021	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
% Moisture	Sydney	Jun 28, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 05, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 05, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 05, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 05, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 2, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	MW01	Jun 23, 2021		Water	S21-Jn54164			X			X			X	X	
2	MW02	Jun 23, 2021		Water	S21-Jn54165			X			X			X	X	
3	MW05	Jun 23, 2021		Water	S21-Jn54166			X			X			X	X	
4	BH13	Jun 24, 2021		Water	S21-Jn54167			X			X			X	X	
5	X2	Jun 23, 2021		Water	S21-Jn54168			X			X			X	X	
6	X4	Jun 23, 2021		Water	S21-Jn54169			X			X			X	X	
7	X5	Jun 23, 2021		Water	S21-Jn54170			X			X			X	X	
8	X7	Jun 23, 2021		Water	S21-Jn54171			X			X			X	X	
9	X8	Jun 23, 2021		Water	S21-Jn54172			X			X			X	X	
10	D01_210623	Jun 23, 2021		Water	S21-Jn54173						X			X		

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

Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 2, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
11	R01_210623	Jun 23, 2021		Water	S21-Jn54174						X			X	X	
12	TS	Jun 24, 2021		Water	S21-Jn54175											X
13	TB	Jun 24, 2021		Water	S21-Jn54176								X			
14	TS	Jun 24, 2021		Soil	S21-Jn54177											X
15	TB	Jun 24, 2021		Soil	S21-Jn54178								X			
16	TP210_1.4	Jun 23, 2021		Soil	S21-Jn54179	X		X		X		X		X	X	
17	TP210_1.8	Jun 23, 2021		Soil	S21-Jn54180	X		X		X		X		X	X	
18	TP211_0.5	Jun 23, 2021		Soil	S21-Jn54181	X		X		X		X		X	X	
19	TP211_1.0	Jun 23, 2021		Soil	S21-Jn54182	X		X		X		X		X	X	
20	TP212_0.7	Jun 23, 2021		Soil	S21-Jn54183	X		X		X		X		X	X	
21	TP212_1.8	Jun 23, 2021		Soil	S21-Jn54184	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
22	TP213_0.6	Jun 23, 2021		Soil	S21-Jn54185	X		X		X		X		X	X	
23	TP213_1.5	Jun 23, 2021		Soil	S21-Jn54186	X		X		X		X		X	X	
24	TP214_0.8	Jun 22, 2021		Soil	S21-Jn54187	X		X		X		X		X	X	
25	TP214_1.2	Jun 22, 2021		Soil	S21-Jn54188	X		X		X		X		X	X	
26	TP214_ACM	Jun 22, 2021		Building Materials	S21-Jn54189		X									
27	TP221_0.2	Jun 24, 2021		Soil	S21-Jn54190	X		X		X		X		X	X	
28	TP221_1.0	Jun 24, 2021		Soil	S21-Jn54191	X		X		X		X		X	X	
29	TP224_0.5	Jun 24, 2021		Soil	S21-Jn54192	X		X		X		X		X	X	
30	TP224_1.5	Jun 24, 2021		Soil	S21-Jn54193	X		X		X		X		X	X	
31	TP232_0.5	Jun 24, 2021		Soil	S21-Jn54194	X		X		X		X		X	X	
32	TP232_1.2	Jun 24, 2021		Soil	S21-Jn54195	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
33	Dup01_210622	Jun 22, 2021		Soil	S21-Jn54196			X		X		X		X	X	
34	Dup02_210623	Jun 23, 2021		Soil	S21-Jn54197			X		X		X		X	X	
35	Dup03_210624	Jun 24, 2021		Soil	S21-Jn54198			X		X		X		X	X	
36	SP236_0.4	Jun 22, 2021		Soil	S21-Jn54199	X		X		X		X		X	X	
37	SP237_0.7	Jun 22, 2021		Soil	S21-Jn54200	X		X		X		X		X	X	
38	SP237_ACM	Jun 22, 2021		Building Materials	S21-Jn54201		X									
39	SP238_0.7	Jun 22, 2021		Soil	S21-Jn54202	X		X		X		X		X	X	
40	SP239_0.7	Jun 22, 2021		Soil	S21-Jn54203	X		X		X		X		X	X	
41	TP213_1.0	Jun 23, 2021		Soil	S21-Jn54204				X							

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Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
Test Counts	20	2	32	1	23	11	23	2	34	33	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							
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	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
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	
Benzene	mg/kg	< 0.1			0.1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	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							
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)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 0			20	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	< 1			1	Pass	
2-Nitrophenol	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-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	< 1			1	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	< 1			1	Pass	
7.12-Dimethylbenz(a)anthracene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 5			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	
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	< 1			1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	81			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Naphthalene	%	78			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	82			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	125			70-130	Pass	
Toluene	%	104			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	94			70-130	Pass	
o-Xylene	%	101			70-130	Pass	
Xylenes - Total*	%	96			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	110			70-130	Pass	
1.1.1-Trichloroethane	%	106			70-130	Pass	
1.2-Dichlorobenzene	%	96			70-130	Pass	
1.2-Dichloroethane	%	117			70-130	Pass	
Benzene	%	121			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
o-Xylene	%	108			70-130	Pass	
Toluene	%	94			70-130	Pass	
Trichloroethene	%	107			70-130	Pass	
Xylenes - Total*	%	107			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	113			70-130	Pass	
Acenaphthylene	%	86			70-130	Pass	
Anthracene	%	80			70-130	Pass	
Benz(a)anthracene	%	83			70-130	Pass	
Benzo(a)pyrene	%	85			70-130	Pass	
Benzo(b&j)fluoranthene	%	80			70-130	Pass	
Benzo(g.h.i)perylene	%	72			70-130	Pass	
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	79			70-130	Pass	
Dibenz(a.h)anthracene	%	71			70-130	Pass	
Fluoranthene	%	80			70-130	Pass	
Fluorene	%	82			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	76			70-130	Pass	
Naphthalene	%	78			70-130	Pass	
Phenanthrene	%	82			70-130	Pass	
Pyrene	%	105			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	98			30-130	Pass	
2.4-Dichlorophenol	%	82			30-130	Pass	
2.4.5-Trichlorophenol	%	73			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.4.6-Trichlorophenol	%	72			30-130	Pass	
2.6-Dichlorophenol	%	82			30-130	Pass	
4-Chloro-3-methylphenol	%	94			30-130	Pass	
Pentachlorophenol	%	72			30-130	Pass	
Tetrachlorophenols - Total	%	86			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Nitrophenol	%	99			30-130	Pass	
2.4-Dimethylphenol	%	78			30-130	Pass	
2-Methylphenol (o-Cresol)	%	78			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	82			30-130	Pass	
4-Nitrophenol	%	87			30-130	Pass	
Dinoseb	%	87			30-130	Pass	
Phenol	%	96			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	103			70-130	Pass	
1.4-Dichlorobenzene	%	93			70-130	Pass	
2-Chlorophenol	%	99			30-130	Pass	
2-Methylphenol (o-Cresol)	%	84			30-130	Pass	
2-Nitrophenol	%	87			30-130	Pass	
2.4-Dichlorophenol	%	79			30-130	Pass	
2.4-Dimethylphenol	%	82			30-130	Pass	
2.4-Dinitrotoluene	%	77			70-130	Pass	
2.4.5-Trichlorophenol	%	73			30-130	Pass	
2.4.6-Trichlorophenol	%	73			30-130	Pass	
2.6-Dichlorophenol	%	80			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	83			30-130	Pass	
4-Chloro-3-methylphenol	%	97			30-130	Pass	
4-Nitrophenol	%	97			30-130	Pass	
Acenaphthene	%	112			70-130	Pass	
Acenaphthylene	%	81			70-130	Pass	
Anthracene	%	78			70-130	Pass	
Benz(a)anthracene	%	79			70-130	Pass	
Benzo(a)pyrene	%	80			70-130	Pass	
Benzo(b&j)fluoranthene	%	71			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	82			70-130	Pass	
Chrysene	%	74			70-130	Pass	
Dibenz(a.h)anthracene	%	91			70-130	Pass	
Fluoranthene	%	77			70-130	Pass	
Fluorene	%	76			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	70			70-130	Pass	
N-Nitrosodipropylamine	%	97			70-130	Pass	
Naphthalene	%	73			70-130	Pass	
Pentachlorophenol	%	83			30-130	Pass	
Phenanthrene	%	77			70-130	Pass	
Phenol	%	95			30-130	Pass	
Pyrene	%	109			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	78			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Cadmium	%	102			80-120	Pass	
Chromium	%	92			80-120	Pass	
Copper	%	90			80-120	Pass	
Lead	%	91			80-120	Pass	
Mercury	%	111			80-120	Pass	
Nickel	%	92			80-120	Pass	
Zinc	%	92			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	100			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	108			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	106			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)	%	98			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	100			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	98			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	103			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	104			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)	%	104			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)	%	95			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	97			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	106			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	98			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	104			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	123			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	97			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)	%	91			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)	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	92			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	W21-Jn48750	NCP	%	89			70-130	Pass	
TRH C6-C10	W21-Jn48750	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Jn60024	NCP	%	71			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH >C10-C16	S21-Jn60035	NCP	%	71			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthylene	S21-Jn61333	NCP	%	101			70-130	Pass	
Anthracene	S21-Jn61333	NCP	%	86			70-130	Pass	
Benz(a)anthracene	S21-Jn61333	NCP	%	93			70-130	Pass	
Benzo(a)pyrene	S21-Jn61333	NCP	%	102			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Jn61333	NCP	%	84			70-130	Pass	
Benzo(g.h.i)perylene	S21-Jn61333	NCP	%	71			70-130	Pass	
Benzo(k)fluoranthene	S21-Jn61333	NCP	%	98			70-130	Pass	
Chrysene	S21-Jn61333	NCP	%	92			70-130	Pass	
Dibenz(a.h)anthracene	S21-Jn57285	NCP	%	87			70-130	Pass	
Fluoranthene	S21-Jn61333	NCP	%	95			70-130	Pass	
Fluorene	S21-Jn61333	NCP	%	85			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn61333	NCP	%	77			70-130	Pass	
Naphthalene	S21-Jn61333	NCP	%	94			70-130	Pass	
Phenanthrene	S21-Jn61333	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S21-Jn61333	NCP	%	90			30-130	Pass	
2.4-Dichlorophenol	S21-Jn61333	NCP	%	86			30-130	Pass	
2.4.6-Trichlorophenol	S21-Jn61333	NCP	%	101			30-130	Pass	
2.6-Dichlorophenol	S21-Jn61333	NCP	%	98			30-130	Pass	
Pentachlorophenol	S21-Jn61333	NCP	%	98			30-130	Pass	
Tetrachlorophenols - Total	S21-Jn61333	NCP	%	71			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	S21-Jn61333	NCP	%	114			30-130	Pass	
2.4-Dimethylphenol	S21-Jn61333	NCP	%	95			30-130	Pass	
2-Methylphenol (o-Cresol)	S21-Jn61333	NCP	%	99			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jn61333	NCP	%	98			30-130	Pass	
4-Nitrophenol	S21-Jn61333	NCP	%	88			30-130	Pass	
Phenol	S21-Jn61333	NCP	%	85			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Lead	S21-Jn54648	NCP	%	80			75-125	Pass	
Zinc	S21-Jn54648	NCP	%	88			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Jn54180	CP	%	79			70-130	Pass	
Pyrene	S21-Jn54180	CP	%	86			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
4-Chloro-3-methylphenol	S21-Jn54180	CP	%	83			30-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn54186	CP	%	85			70-130	Pass	
Toluene	S21-Jn54186	CP	%	75			70-130	Pass	
Ethylbenzene	S21-Jn54186	CP	%	73			70-130	Pass	
m&p-Xylenes	S21-Jn54186	CP	%	80			70-130	Pass	
o-Xylene	S21-Jn54186	CP	%	85			70-130	Pass	
Xylenes - Total*	S21-Jn54186	CP	%	82			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorobutanoic acid (PFBA)	S21-Jn54190	CP	%	103			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jn54190	CP	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jn54190	CP	%	107			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jn54190	CP	%	115			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jn54190	CP	%	106			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jn54190	CP	%	113			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jn54190	CP	%	112			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jn54190	CP	%	105			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jn54190	CP	%	108			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jn54190	CP	%	109			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jn54190	CP	%	101			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jn54190	CP	%	101			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jn54190	CP	%	114			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jn54190	CP	%	107			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jn54190	CP	%	110			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jn54190	CP	%	97			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jn54190	CP	%	101			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jn54190	CP	%	98			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jn54190	CP	%	101			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jn54190	CP	%	88			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jn54190	CP	%	100			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jn54190	CP	%	103			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jn54190	CP	%	87			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jn54190	CP	%	93			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jn54190	CP	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jn54190	CP	%	86			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S21-Jn54190	CP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jn54190	CP	%	100			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jn54190	CP	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jn54190	CP	%	103			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
Naphthalene	S21-Jn54197	CP	%	71			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn54197	CP	%	79			70-130	Pass	
Toluene	S21-Jn54197	CP	%	72			70-130	Pass	
Ethylbenzene	S21-Jn54197	CP	%	72			70-130	Pass	
m&p-Xylenes	S21-Jn54197	CP	%	74			70-130	Pass	
o-Xylene	S21-Jn54197	CP	%	79			70-130	Pass	
Xylenes - Total*	S21-Jn54197	CP	%	76			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jn54203	CP	%	107			75-125	Pass	
Cadmium	S21-Jn54203	CP	%	98			75-125	Pass	
Chromium	S21-Jn54203	CP	%	100			75-125	Pass	
Copper	S21-Jn54203	CP	%	115			75-125	Pass	
Mercury	S21-Jn54203	CP	%	109			75-125	Pass	
Nickel	S21-Jn54203	CP	%	107			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jn54179	CP	mg/kg	< 0.5	0.8	78	30%	Fail	Q15
Fluorene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jn54179	CP	mg/kg	< 0.5	0.9	73	30%	Fail	Q15
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jn54179	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jn54179	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jn54179	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2.4-Dinitrophenol	S21-Jn54179	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jn54179	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jn54179	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jn54179	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jn54179	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jn54179	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Dimethylaminoazobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jn54179	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jn54179	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jn54179	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jn54179	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jn54179	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)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jn54179	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jn54179	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jn54184	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jn54184	CP	mg/kg	< 50	55	13	30%	Pass	
TRH C29-C36	S21-Jn54184	CP	mg/kg	85	88	3.0	30%	Pass	
TRH >C10-C16	S21-Jn54184	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jn54184	CP	mg/kg	120	120	6.0	30%	Pass	
TRH >C34-C40	S21-Jn54184	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jn54185	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jn54185	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jn54185	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jn54185	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jn54185	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jn54185	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jn54185	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jn54185	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2-Dibromoethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jn54185	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jn54185	CP	%	7.8	8.1	5.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluoroundecanoic acid (PFUnDA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jn54188	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jn54188	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jn54188	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)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jn54188	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jn54188	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jn54191	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jn54191	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jn54191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jn54191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jn54191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jn54191	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jn54191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jn54191	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jn54191	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn54191	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S21-Jn54191	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jn54191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S21-Jn54191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S21-Jn54191	CP	mg/kg	13	9.0	38	30%	Fail	Q15
Mercury	S21-Jn54191	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jn54191	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S21-Jn54191	CP	mg/kg	150	300	65	30%	Fail	Q02
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jn54195	CP	mg/kg	< 0.5	0.7	140	30%	Fail	Q15
Benzo(a)pyrene	S21-Jn54195	CP	mg/kg	< 0.5	0.7	130	30%	Fail	Q15
Benzo(b&j)fluoranthene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jn54195	CP	mg/kg	< 0.5	0.6	110	30%	Fail	Q15
Chrysene	S21-Jn54195	CP	mg/kg	< 0.5	0.7	140	30%	Fail	Q15
Dibenz(a.h)anthracene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jn54195	CP	mg/kg	< 0.5	0.6	97	30%	Fail	Q15
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jn54195	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jn54195	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jn54195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jn54195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jn54195	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jn54195	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jn54195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jn54195	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1.2.3.4-Tetrachlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jn54195	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Hexachlorobutadiene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jn54195	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jn54195	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jn54196	CP	%	12	13	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jn54198	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jn54198	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jn54198	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S21-Jn54198	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jn54198	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jn54198	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jn54202	CP	mg/kg	6.2	4.5	32	30%	Fail	Q15
Cadmium	S21-Jn54202	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jn54202	CP	mg/kg	18	15	16	30%	Pass	
Copper	S21-Jn54202	CP	mg/kg	63	47	30	30%	Pass	
Lead	S21-Jn54202	CP	mg/kg	180	120	42	30%	Fail	Q02
Mercury	S21-Jn54202	CP	mg/kg	0.6	0.4	42	30%	Fail	Q15
Nickel	S21-Jn54202	CP	mg/kg	17	11	40	30%	Fail	Q02
Zinc	S21-Jn54202	CP	mg/kg	370	340	7.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
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).
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
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
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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 Hunter Valley
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Newcastle
NSW 2300

NATA Accredited
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Attention: **Ian Batterley**

Report **806169-W**
Project name UNICORN
Received Date Jun 28, 2021

Client Sample ID			**MW01**	**MW02**	**MW05**	**BH13**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-Jn54164**	**S21-Jn54165**	**S21-Jn54166**	**S21-Jn54167**
Date Sampled			**Jun 23, 2021**	**Jun 23, 2021**	**Jun 23, 2021**	**Jun 24, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	1.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	1.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	0.05
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.31
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	0.26
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	0.9
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	1.21
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	128	134	119	130
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.012
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	128	134	119	130
Toluene-d8 (surr.)	1	%	118	105	123	118
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.02
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.05
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.05
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.05
2-Fluorobiphenyl (surr.)	1	%	INT	116	99	123
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	84
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Fluorobiphenyl (surr.)	1	%	INT	116	99	123
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	140	95
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.02
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.005
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.05
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Nitrobenzene-d5 (surr.)	1	%	INT	INT	INT	136
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.05
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	34	29	26	23
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.01
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.01
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.001	0.002	< 0.001	0.014
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.003
Copper (filtered)	0.001	mg/L	0.005	0.002	< 0.001	0.007
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.004
Zinc (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	0.010
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.05	0.03	0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	< 0.01	0.05	0.02	< 0.01
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	< 0.01	0.03	0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	< 0.01	[N09]0.03	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	76	67	66	24
13C5-PFPeA (surr.)	1	%	104	92	93	56
13C5-PFHxA (surr.)	1	%	127	101	113	86

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	126	92	100	116
13C8-PFOA (surr.)	1	%	126	87	98	126
13C5-PFNA (surr.)	1	%	114	85	87	125
13C6-PFDA (surr.)	1	%	99	67	73	106
13C2-PFUnDA (surr.)	1	%	74	56	57	63
13C2-PFDoDA (surr.)	1	%	31	27	28	19
13C2-PFTeDA (surr.)	1	%	INT	INT	INT	INT
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	63	62	67	80
D3-N-MeFOSA (surr.)	1	%	29	47	43	46
D5-N-EtFOSA (surr.)	1	%	24	43	37	40
D7-N-MeFOSE (surr.)	1	%	17	25	24	24
D9-N-EtFOSE (surr.)	1	%	12	21	19	19
D5-N-EtFOSAA (surr.)	1	%	10	18	10	11
D3-N-MeFOSAA (surr.)	1	%	24	22	13	28
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	[N09]0.02	< 0.01	< 0.01
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	[N09]0.02	< 0.01	< 0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	112	100	106	97
18O2-PFHxS (surr.)	1	%	99	91	94	93
13C8-PFOS (surr.)	1	%	92	85	87	85
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	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	73	62	75	123
13C2-6:2 FTSA (surr.)	1	%	106	62	70	134
13C2-8:2 FTSA (surr.)	1	%	96	71	77	134
13C2-10:2 FTSA (surr.)	1	%	27	25	25	14

Client Sample ID			MW01	MW02	MW05	BH13
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54164	S21-Jn54165	S21-Jn54166	S21-Jn54167
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.04	< 0.01	< 0.01
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	< 0.01	0.05	< 0.01	< 0.01
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	< 0.01	0.07	< 0.01	< 0.01
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	< 0.05	0.2	0.06	< 0.05
Sum of PFASs (n=30)*	0.1	ug/L	< 0.1	0.2	< 0.1	< 0.1

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	123	133	137	127
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	123	133	137	127
Toluene-d8 (surr.)	1	%	114	111	113	115
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	133	98	108	125
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	INT
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Fluorobiphenyl (surr.)	1	%	133	98	108	125
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Tribromophenol (surr.)	1	%	INT	147	134	108
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Nitrobenzene-d5 (surr.)	1	%	INT	INT	INT	150
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	33	32	31	29
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.002	0.003	0.002	0.003
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper (filtered)	0.001	mg/L	0.006	< 0.001	0.004	0.004
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	0.002	0.003	0.001
Zinc (filtered)	0.005	mg/L	< 0.005	< 0.005	0.24	< 0.005
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.04	0.06	0.03	0.02
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.03	0.04	0.03	0.02
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	0.02	0.03	0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.02	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	62	76	70	65
13C5-PFPeA (surr.)	1	%	82	97	96	81
13C5-PFHxA (surr.)	1	%	88	105	114	82

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	79	95	106	75
13C8-PFOA (surr.)	1	%	81	97	107	75
13C5-PFNA (surr.)	1	%	75	90	89	74
13C6-PFDA (surr.)	1	%	63	70	73	59
13C2-PFUnDA (surr.)	1	%	50	55	52	49
13C2-PFDoDA (surr.)	1	%	27	27	22	27
13C2-PFTeDA (surr.)	1	%	INT	INT	INT	INT
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	61	72	76	69
D3-N-MeFOSA (surr.)	1	%	48	53	40	44
D5-N-EtFOSA (surr.)	1	%	45	48	32	40
D7-N-MeFOSE (surr.)	1	%	33	33	26	33
D9-N-EtFOSE (surr.)	1	%	27	27	21	28
D5-N-EtFOSAA (surr.)	1	%	11	15	7.0	8.0
D3-N-MeFOSAA (surr.)	1	%	13	19	9.0	10
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	[N09]0.02	[N09]0.02	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	< 0.01	[N09]0.01	< 0.01	[N09]0.08
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	102	103	105	96
18O2-PFHxS (surr.)	1	%	92	92	99	95
13C8-PFOS (surr.)	1	%	83	81	80	84
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	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	64	82	83	63
13C2-6:2 FTSA (surr.)	1	%	65	78	80	64
13C2-8:2 FTSA (surr.)	1	%	70	81	75	69
13C2-10:2 FTSA (surr.)	1	%	27	31	21	24

Client Sample ID			X2	X4	X5	X7
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54168	S21-Jn54169	S21-Jn54170	S21-Jn54171
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 23, 2021
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	< 0.01	0.03	0.02	0.1
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.01	0.03	< 0.01	0.08
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.01	0.05	0.02	0.1
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.1	0.18	0.09	0.14
Sum of PFASs (n=30)*	0.1	ug/L	0.1	0.18	< 0.1	0.14

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	132	128	135	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Bromofluorobenzene (surr.)	1	%	132	128	135	-
Toluene-d8 (surr.)	1	%	110	113	108	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Fluorobiphenyl (surr.)	1	%	102	137	110	-
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	-
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2-Fluorobiphenyl (surr.)	1	%	102	137	110	-
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4.6-Tribromophenol (surr.)	1	%	129	120	INT	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	-
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Nitrobenzene-d5 (surr.)	1	%	130	142	INT	-
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Phenol-d6 (surr.)	1	%	25	26	29	-
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chromium (hexavalent)	0.005	mg/L	< 0.005	-	-	-
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper (filtered)	0.001	mg/L	0.001	< 0.001	< 0.001	-
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Zinc (filtered)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	-	< 0.05	-
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.02	-	< 0.01	-
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.02	-	< 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	%	75	-	84	-
13C5-PFPeA (surr.)	1	%	99	-	106	-
13C5-PFHxA (surr.)	1	%	108	-	108	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	101	-	95	-
13C8-PFOA (surr.)	1	%	99	-	95	-
13C5-PFNA (surr.)	1	%	89	-	91	-
13C6-PFDA (surr.)	1	%	77	-	77	-
13C2-PFUnDA (surr.)	1	%	68	-	75	-
13C2-PFDoDA (surr.)	1	%	37	-	39	-
13C2-PFTeDA (surr.)	1	%	INT	-	INT	-
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	%	68	-	64	-
D3-N-MeFOSA (surr.)	1	%	52	-	63	-
D5-N-EtFOSA (surr.)	1	%	46	-	55	-
D7-N-MeFOSE (surr.)	1	%	29	-	37	-
D9-N-EtFOSE (surr.)	1	%	26	-	30	-
D5-N-EtFOSAA (surr.)	1	%	24	-	35	-
D3-N-MeFOSAA (surr.)	1	%	30	-	44	-
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	[N09]0.02	-	< 0.01	-
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	-	< 0.01	-
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.15	-	< 0.01	-
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	-	< 0.01	-
13C3-PFBS (surr.)	1	%	109	-	106	-
18O2-PFHxS (surr.)	1	%	97	-	96	-
13C8-PFOS (surr.)	1	%	90	-	89	-
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 FTS (surr.)	1	%	96	-	93	-
13C2-6:2 FTSA (surr.)	1	%	89	-	87	-
13C2-8:2 FTSA (surr.)	1	%	93	-	92	-
13C2-10:2 FTSA (surr.)	1	%	36	-	42	-

Client Sample ID			X8	D01_210623	R01_210623	TS
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jn54172	S21-Jn54173	S21-Jn54174	S21-Jn54175
Date Sampled			Jun 23, 2021	Jun 23, 2021	Jun 23, 2021	Jun 24, 2021
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.17	-	< 0.01	-
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.15	-	< 0.01	-
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.17	-	< 0.01	-
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.21	-	< 0.05	-
Sum of PFASs (n=30)*	0.1	ug/L	0.21	-	< 0.1	-
BTEX						
Benzene	1	%	-	-	-	110
Ethylbenzene	1	%	-	-	-	100
m&p-Xylenes	1	%	-	-	-	110
o-Xylene	1	%	-	-	-	100
Toluene	1	%	-	-	-	100
Xylenes - Total	1	%	-	-	-	100
4-Bromofluorobenzene (surr.)	1	%	-	-	-	108

Client Sample ID			TB
Sample Matrix			Water
Eurofins Sample No.			S21-Jn54176
Date Sampled			Jun 24, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	0.02	mg/L	< 0.02
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
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	%	108

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jun 28, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Volatile Organics	Sydney	Jun 28, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jun 28, 2021	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jun 28, 2021	28 Days
- Method: In-house method E057.1			
Metals M8 filtered	Sydney	Jun 28, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jun 30, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jun 30, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jun 30, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jun 30, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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NSW 2300

Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 2, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**											
1	MW01	Jun 23, 2021		Water	S21-Jn54164			X			X			X	X	
2	MW02	Jun 23, 2021		Water	S21-Jn54165			X			X			X	X	
3	MW05	Jun 23, 2021		Water	S21-Jn54166			X			X			X	X	
4	BH13	Jun 24, 2021		Water	S21-Jn54167			X			X			X	X	
5	X2	Jun 23, 2021		Water	S21-Jn54168			X			X			X	X	
6	X4	Jun 23, 2021		Water	S21-Jn54169			X			X			X	X	
7	X5	Jun 23, 2021		Water	S21-Jn54170			X			X			X	X	
8	X7	Jun 23, 2021		Water	S21-Jn54171			X			X			X	X	
9	X8	Jun 23, 2021		Water	S21-Jn54172			X			X			X	X	
10	D01_210623	Jun 23, 2021		Water	S21-Jn54173						X			X		

eurofins | Environment Testing

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

Project Name: UNICORN

Order No.:
Report #: 806169
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jun 28, 2021 10:33 AM
Due: Jul 2, 2021
Priority: 5 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7 (filtered metals)	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
11	R01_210623	Jun 23, 2021		Water	S21-Jn54174						X			X	X	
12	TS	Jun 24, 2021		Water	S21-Jn54175											X
13	TB	Jun 24, 2021		Water	S21-Jn54176								X			
14	TS	Jun 24, 2021		Soil	S21-Jn54177											X
15	TB	Jun 24, 2021		Soil	S21-Jn54178								X			
16	TP210_1.4	Jun 23, 2021		Soil	S21-Jn54179	X		X		X		X		X	X	
17	TP210_1.8	Jun 23, 2021		Soil	S21-Jn54180	X		X		X		X		X	X	
18	TP211_0.5	Jun 23, 2021		Soil	S21-Jn54181	X		X		X		X		X	X	
19	TP211_1.0	Jun 23, 2021		Soil	S21-Jn54182	X		X		X		X		X	X	
20	TP212_0.7	Jun 23, 2021		Soil	S21-Jn54183	X		X		X		X		X	X	
21	TP212_1.8	Jun 23, 2021		Soil	S21-Jn54184	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
22	TP213_0.6	Jun 23, 2021		Soil	S21-Jn54185	X		X		X		X		X	X	
23	TP213_1.5	Jun 23, 2021		Soil	S21-Jn54186	X		X		X		X		X	X	
24	TP214_0.8	Jun 22, 2021		Soil	S21-Jn54187	X		X		X		X		X	X	
25	TP214_1.2	Jun 22, 2021		Soil	S21-Jn54188	X		X		X		X		X	X	
26	TP214_ACM	Jun 22, 2021		Building Materials	S21-Jn54189		X									
27	TP221_0.2	Jun 24, 2021		Soil	S21-Jn54190	X		X		X		X		X	X	
28	TP221_1.0	Jun 24, 2021		Soil	S21-Jn54191	X		X		X		X		X	X	
29	TP224_0.5	Jun 24, 2021		Soil	S21-Jn54192	X		X		X		X		X	X	
30	TP224_1.5	Jun 24, 2021		Soil	S21-Jn54193	X		X		X		X		X	X	
31	TP232_0.5	Jun 24, 2021		Soil	S21-Jn54194	X		X		X		X		X	X	
32	TP232_1.2	Jun 24, 2021		Soil	S21-Jn54195	X		X		X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794															X	
Perth Laboratory - NATA Site # 23736																
Mayfield Laboratory - NATA Site # 25079																
External Laboratory																
33	Dup01_210622	Jun 22, 2021		Soil	S21-Jn54196			X		X		X		X	X	
34	Dup02_210623	Jun 23, 2021		Soil	S21-Jn54197			X		X		X		X	X	
35	Dup03_210624	Jun 24, 2021		Soil	S21-Jn54198			X		X		X		X	X	
36	SP236_0.4	Jun 22, 2021		Soil	S21-Jn54199	X		X		X		X		X	X	
37	SP237_0.7	Jun 22, 2021		Soil	S21-Jn54200	X		X		X		X		X	X	
38	SP237_ACM	Jun 22, 2021		Building Materials	S21-Jn54201		X									
39	SP238_0.7	Jun 22, 2021		Soil	S21-Jn54202	X		X		X		X		X	X	
40	SP239_0.7	Jun 22, 2021		Soil	S21-Jn54203	X		X		X		X		X	X	
41	TP213_1.0	Jun 23, 2021		Soil	S21-Jn54204				X							

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Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
Test Counts	20	2	32	1	23	11	23	2	34	33	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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.005			0.005	Pass	
1.2-Dichlorobenzene	mg/L	< 0.005			0.005	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	< 0.005			0.005	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005			0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Naphthylamine	mg/L	< 0.005			0.005	Pass	
2-Nitroaniline	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	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	
2.6-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005			0.005	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005			0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
4.4'-DDD	mg/L	< 0.005			0.005	Pass	
4.4'-DDE	mg/L	< 0.005			0.005	Pass	
4.4'-DDT	mg/L	< 0.005			0.005	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.005			0.005	Pass	
a-BHC	mg/L	< 0.005			0.005	Pass	
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Acetophenone	mg/L	< 0.005			0.005	Pass	
Aldrin	mg/L	< 0.005			0.005	Pass	
Aniline	mg/L	< 0.005			0.005	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
b-BHC	mg/L	< 0.005			0.005	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	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005			0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005			0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005			0.005	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
d-BHC	mg/L	< 0.005			0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005			0.005	Pass	
Di-n-octyl phthalate	mg/L	< 0.005			0.005	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.005			0.005	Pass	
Dieldrin	mg/L	< 0.005			0.005	Pass	
Diethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005			0.005	Pass	
Diphenylamine	mg/L	< 0.005			0.005	Pass	
Endosulfan I	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II	mg/L	< 0.005			0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005			0.005	Pass	
Endrin	mg/L	< 0.005			0.005	Pass	
Endrin aldehyde	mg/L	< 0.005			0.005	Pass	
Endrin ketone	mg/L	< 0.005			0.005	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
g-BHC (Lindane)	mg/L	< 0.005			0.005	Pass	
Heptachlor	mg/L	< 0.005			0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005			0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005			0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005			0.005	Pass	
Hexachlorocyclopentadiene	mg/L	< 0.005			0.005	Pass	
Hexachloroethane	mg/L	< 0.005			0.005	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005			0.005	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.005			0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Chromium (hexavalent)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
TRH C6-C9	%	91			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
Naphthalene	%	82			70-130	Pass	
TRH C6-C10	%	94			70-130	Pass	
TRH >C10-C16	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	126			70-130	Pass	
Toluene	%	105			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	123			70-130	Pass	
o-Xylene	%	125			70-130	Pass	
Xylenes - Total*	%	124			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	129			70-130	Pass	
1.1.1-Trichloroethane	%	102			70-130	Pass	
1.2-Dichlorobenzene	%	97			70-130	Pass	
1.2-Dichloroethane	%	110			70-130	Pass	
Trichloroethene	%	104			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	77			70-130	Pass	
Pyrene	%	93			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.4-Dichlorobenzene	%	86			70-130	Pass	
4-Chloro-3-methylphenol	%	42			30-130	Pass	
4-Nitrophenol	%	65			30-130	Pass	
N-Nitrosodipropylamine	%	90			70-130	Pass	
Pentachlorophenol	%	75			30-130	Pass	
Phenol	%	85			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	112			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic (filtered)	%	103			80-120	Pass	
Cadmium (filtered)	%	102			80-120	Pass	
Chromium (filtered)	%	97			80-120	Pass	
Copper (filtered)	%	91			80-120	Pass	
Lead (filtered)	%	94			80-120	Pass	
Mercury (filtered)	%	98			80-120	Pass	
Nickel (filtered)	%	94			80-120	Pass	
Zinc (filtered)	%	97			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	99			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	109			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	114			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	109			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	114			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	114			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	129			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	110			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	114			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	62			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	124			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	110			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	112			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	110			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	114			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	117			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	115			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	110			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	101			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	93			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	102			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	102			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	103			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	115			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	110			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	61			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	106			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	112			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)			%	98			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	110			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	N21-Jn54030	NCP	%	85			70-130	Pass	
TRH >C10-C16	N21-Jn54030	NCP	%	84			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Jl01857	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	B21-Jn54390	NCP	%	129			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	B21-Jn54390	NCP	%	105			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	B21-Jn54390	NCP	%	116			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-Jn54390	NCP	%	106			50-150	Pass	
Perfluorooctanoic acid (PFOA)	B21-Jn54390	NCP	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	B21-Jn54390	NCP	%	116			50-150	Pass	
Perfluorodecanoic acid (PFDA)	B21-Jn54390	NCP	%	124			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-Jn54390	NCP	%	107			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-Jn54390	NCP	%	119			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-Jn54390	NCP	%	66			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-Jn54390	NCP	%	137			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	B21-Jn54390	NCP	%	111			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-Jn54390	NCP	%	110			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-Jn54390	NCP	%	109			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-Jn54390	NCP	%	118			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-Jn54390	NCP	%	121			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-Jn54390	NCP	%	108			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-Jn54390	NCP	%	117			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	B21-Jn54390	NCP	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-Jn54390	NCP	%	90			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-Jn54390	NCP	%	105			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-Jn54390	NCP	%	98			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-Jn54390	NCP	%	103			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-Jn54390	NCP	%	108			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanesulfonic acid (PFOS)	B21-Jn54390	NCP	%	110			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-Jn54390	NCP	%	61			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	B21-Jn54390	NCP	%	109			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	B21-Jn54390	NCP	%	118			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B21-Jn54390	NCP	%	106			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B21-Jn54390	NCP	%	112			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jn54165	CP	%	89			70-130	Pass	
Naphthalene	S21-Jn54165	CP	%	71			70-130	Pass	
TRH C6-C10	S21-Jn54165	CP	%	90			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jn54165	CP	%	122			70-130	Pass	
Toluene	S21-Jn54165	CP	%	101			70-130	Pass	
Ethylbenzene	S21-Jn54165	CP	%	109			70-130	Pass	
m&p-Xylenes	S21-Jn54165	CP	%	121			70-130	Pass	
o-Xylene	S21-Jn54165	CP	%	124			70-130	Pass	
Xylenes - Total*	S21-Jn54165	CP	%	122			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jn54165	CP	%	126			70-130	Pass	
1.1.1-Trichloroethane	S21-Jn54165	CP	%	100			70-130	Pass	
1.2-Dichlorobenzene	S21-Jn54165	CP	%	87			70-130	Pass	
1.2-Dichloroethane	S21-Jn54165	CP	%	109			70-130	Pass	
Trichloroethene	S21-Jn54165	CP	%	103			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Jn54173	CP	%	97			75-125	Pass	
Cadmium (filtered)	S21-Jn54173	CP	%	94			75-125	Pass	
Chromium (filtered)	S21-Jn54173	CP	%	90			75-125	Pass	
Copper (filtered)	S21-Jn54173	CP	%	87			75-125	Pass	
Lead (filtered)	S21-Jn54173	CP	%	87			75-125	Pass	
Mercury (filtered)	S21-Jn54173	CP	%	84			75-125	Pass	
Nickel (filtered)	S21-Jn54173	CP	%	88			75-125	Pass	
Zinc (filtered)	S21-Jn54173	CP	%	87			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jn54050	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Jn54050	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Jn54050	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C10-C16	S21-Jn54050	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Jn54050	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Jn54050	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S21-Jn60070	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	S21-Jn60070	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
1-Chloronaphthalene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1-Naphthylamine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chloronaphthalene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chlorophenol	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methylnaphthalene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Naphthylamine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitroaniline	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitrophenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2-Picoline	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jn60070	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jn60070	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
3-Methylcholanthrene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Aminobiphenyl	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
4-Nitrophenol	S21-Jn60070	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
4.4'-DDD	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDE	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDT	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
a-BHC	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Acetophenone	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aldrin	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aniline	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
b-BHC	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Benzyl chloride	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
d-BHC	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenzofuran	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dieldrin	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diethyl phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethyl phthalate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diphenylamine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan I	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan II	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan sulphate	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin aldehyde	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin ketone	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
g-BHC (Lindane)	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor epoxide	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobutadiene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachloroethane	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Methoxychlor	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Nitrobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorophenol	S21-Jn60070	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Phenol	S21-Jn60070	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Pronamide	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Trifluralin	S21-Jn60070	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Jn54165	CP	mg/L	0.002	0.003	5.0	30%	Pass	
Cadmium (filtered)	S21-Jn54165	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Jn54165	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Jn54165	CP	mg/L	0.002	0.002	1.0	30%	Pass	
Lead (filtered)	S21-Jn54165	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S21-Jn54165	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Jn54165	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S21-Jn54165	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jn54166	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Naphthalene	S21-Jn54166	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Jn54166	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Jn54166	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Jn54166	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S21-Jn54166	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Chloromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S21-Jn54166	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	S21-Jn54171	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Jn54171	CP	mg/L	0.003	0.003	2.0	30%	Pass	
Cadmium (filtered)	S21-Jn54171	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Jn54171	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Jn54171	CP	mg/L	0.004	0.004	1.0	30%	Pass	
Lead (filtered)	S21-Jn54171	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S21-Jn54171	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Jn54171	CP	mg/L	0.001	0.001	9.0	30%	Pass	
Zinc (filtered)	S21-Jn54171	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jn54174	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)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jn54174	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jn54174	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jn54174	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	No
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).

Authorised by:

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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.

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Sydney Laboratory
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02 9900 8400 EnviroSampleNSW@eurofins.com

Brisbane Laboratory
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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 №	Project Manager: Ian Batterley
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name: UNICORN	EDD Format (ESdat, EQuIS, Custom): Esdat/ EQUIS
Contact Name	Michael Mercer		
Phone №	439623103		
Special Directions	3 Day TA		
Purchase Order			
Quote ID №	210615ERMN		

Sampler(s)	Michael Mercer
Handed over by	Michael Mercer
Email for Invoice	Ian.batterley@erm.com
Email for Results	Ian.batterley@erm.com and michael.mercer@erm.co and anthony.richard@erm.com

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

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964, WA Guidelines)

Turnaround Time (TAT) Requirements (Default will be 5 days if not t): Overnight (9am)*; 1 Day*; 2 Day*; 3 Day*; 5 Day; Other (. * Surcharges ap

Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	B7A	SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	+- ACM	Sample Comments / Dangerous Goods Hazard Warning
TS	1/07/21	S										X		
TB	1/07/21	S									X			
GW230_0.6	28/06/21	S		X		X	X	X	X					
GW230_3.0	28/06/21	s		X		X	X	X	X					
GW216_1.0	28/06/21	s		X		X	X	X	X					
GW216_3.0	28/06/21	s		X		X	X	X	X					
GW207_0.6	28/06/21	s		X		X	X	X	X					
DUP04_210628	28/06/21	s		X		X	X	X	X					
TRIP04_210628	28/06/21	s		X		X	X	X	X					FORWARD TO ALS (DUP)
TP202_0.3	28/06/21	s		X		X		X	X					
TP202_0.8	28/06/21	s		X		X	X	X	X					
TP202_1.2	28/06/21	s		X		X	X	X	X					
TP202_1.8	28/06/21	s		X		X	X	X	X					
GW207_3.0	29/06/21	s		X		X	X	X	X					
GW206_2.5	29/06/21	s		X		X	X	X	X					

GW206_4.0	29/06/21	s		X		X	X	X	X																						
GW233_2.5	29/06/21	s		X		X	X	X	X																						
GW233_4.0	29/06/21	s		X		X	X	X	X																						
GW235_0.3	29/06/21	s		X		X	X	X	X																						
GW235_3.0	29/06/21	s		X		X	X	X	X																						
GW219_2.5	30/06/21	s		X		X	X	X	X																						
GW219_4.0	30/06/21	s		X		X	X	X	X																						
GW222_2.0	30/06/21	s		X		X	X	X	X																						
GW222_4.0	30/06/21	s		X		X	X	X	X																						
GW223_0.2	30/06/21	s		X		X	X	X	X																						
GW223_3.0	30/06/21	s		X		X	X	X	X																						
GW225_0.5	30/06/21	s		X		X	X	X	X																						
GW225_3.0	30/06/21	s		X		X	X	X	X																						
DUP05_210630	30/06/21	s		X		X	X	X	X																						
TRIP05_210630	30/06/21	s		X		X	X	X	X																						FORWARD TO ALS (DUP)
TP218_0.4	30/06/21	s		X		X	X	X	X																						
TP218_1.2	30/06/21	s		X		X	X	X	X																						
GW228_3.0	1/07/21	s		X		X	X	X	X																						
GW228_4.0	1/07/21	s		X		X	X	X	X																						
BH220_0.4	1/07/21	s		X		X	X	X	X																						
Total Counts				#			#	#	#		#	#																			

Method of Shipment	|- Courier (#)	| Hand Delivered	| Postal		Name	Anthony Ricjard	Signature		Date	1/07/21	Time	__:__
Eurofins | mgt Laboratory Use Only	Received By	Jeremy	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	1/7	__/__/__	Time	2:20pm	Temperature	5.7
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		__/__/__	Time	__:__	Report №	807316

mission 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.
ofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

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Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Ian Batterley
Project name:	UNICORN
Project ID:	Not provided
Turnaround time:	3 Day
Date/Time received	Jul 1, 2021 2:20 PM
Eurofins reference	807316

Sample Information

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

Notes

Sample GW207_3.0 received as GW208_3.0, logged for analysis as per COC. Received extra sample GW207 ACM, logged on hold. Trip spike and blank received after expiry (29/06/21). TRIP04_210628 and TRIP05_210628 (1x jar, 1x PFAS tub and 1x bag each) sent to ALS.

Contact

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

Elvis Dsouza on phone : or by email: ElvisDsouza@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 Hunter Valley
Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: UNICORN

Order No.:
Report #: 807316
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 1, 2021 2:20 PM
Due: Jul 6, 2021
Priority: 3 Day
Contact Name: - ALL INVOICES

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	TRIP SPIKE	Jul 01, 2021		Soil	S21-Jl01431									X
2	LAB TRIP SPIKE	Jul 01, 2021		Soil	S21-Jl01432									X
3	TRIP BLANK	Jul 01, 2021		Soil	S21-Jl01433						X			
4	GW230_0.6	Jun 28, 2021		Soil	S21-Jl01434	X	X		X	X		X	X	
5	GW230_3.9	Jun 28, 2021		Soil	S21-Jl01435	X	X		X	X		X	X	
6	GW216_1.0	Jun 28, 2021		Soil	S21-Jl01436	X	X		X	X		X	X	
7	GW216_3.0	Jun 28, 2021		Soil	S21-Jl01437	X	X		X	X		X	X	
8	GW207_0.6	Jun 28, 2021		Soil	S21-Jl01438	X	X		X	X		X	X	
9	DUP04_21062	Jun 28, 2021		Soil	S21-Jl01439	X	X		X	X		X	X	

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Company Name: ERM Hunter Valley
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Newcastle
NSW 2300

Project Name: UNICORN

Order No.:
Report #: 807316
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 1, 2021 2:20 PM
Due: Jul 6, 2021
Priority: 3 Day
Contact Name: - ALL INVOICES

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
	8													
10	TP202_0.3	Jun 28, 2021		Soil	S21-Jl01440	X	X		X	X			X	
11	TP202_0.8	Jun 28, 2021		Soil	S21-Jl01441	X	X		X	X		X	X	
12	TP202_1.2	Jun 28, 2021		Soil	S21-Jl01442	X	X		X	X		X	X	
13	TP202_1.8	Jun 28, 2021		Soil	S21-Jl01443	X	X		X	X		X	X	
14	GW207_3.0	Jun 29, 2021		Soil	S21-Jl01444	X	X		X	X		X	X	
15	GW206_2.5	Jun 29, 2021		Soil	S21-Jl01445	X	X		X	X		X	X	
16	GW206_4.0	Jun 29, 2021		Soil	S21-Jl01446	X	X		X	X		X	X	
17	GW233_2.5	Jun 29, 2021		Soil	S21-Jl01447	X	X		X	X		X	X	
18	GW233_4.0	Jun 29, 2021		Soil	S21-Jl01448	X	X		X	X		X	X	
19	GW235_0.3	Jun 29, 2021		Soil	S21-Jl01449	X	X		X	X		X	X	

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Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
20	GW235_3.0	Jun 29, 2021		Soil	S21-Jl01450	X	X		X	X		X	X	
21	GW219_2.5	Jun 30, 2021		Soil	S21-Jl01451	X	X		X	X		X	X	
22	GW219_4.0	Jun 30, 2021		Soil	S21-Jl01452	X	X		X	X		X	X	
23	GW222_2.0	Jun 30, 2021		Soil	S21-Jl01453	X	X		X	X		X	X	
24	GW222_4.0	Jun 30, 2021		Soil	S21-Jl01454	X	X		X	X		X	X	
25	GW223_0.2	Jun 30, 2021		Soil	S21-Jl01455	X	X		X	X		X	X	
26	GW223_3.0	Jun 30, 2021		Soil	S21-Jl01456	X	X		X	X		X	X	
27	GW225_0.5	Jun 30, 2021		Soil	S21-Jl01457	X	X		X	X		X	X	
28	GW225_3.0	Jun 30, 2021		Soil	S21-Jl01458	X	X		X	X		X	X	
29	DUP05_210630	Jun 30, 2021		Soil	S21-Jl01459	X	X		X	X		X	X	
30	TP218_0.4	Jun 30, 2021		Soil	S21-Jl01460	X	X		X	X		X	X	

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IANZ # 1290

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

Project Name: UNICORN

Order No.:
Report #: 807316
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 1, 2021 2:20 PM
Due: Jul 6, 2021
Priority: 3 Day
Contact Name: - ALL INVOICES

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
31	TP218_1.2	Jun 30, 2021		Soil	S21-Jl01461	X	X		X	X		X	X	
32	GW228_3.0	Jul 01, 2021		Soil	S21-Jl01462	X	X		X	X		X	X	
33	GW228_4.0	Jul 01, 2021		Soil	S21-Jl01463	X	X		X	X		X	X	
34	BH220_0.4	Jul 01, 2021		Soil	S21-Jl01464	X	X		X	X		X	X	
35	GW207 ACM	Jul 01, 2021		Building Materials	S21-Jl01559			X						
Test Counts						31	31	1	31	31	1	30	31	2

Certificate of Analysis

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

Attention:	Ian Batterley
Report	807316-AID
Project Name	UNICORN
Received Date	Jul 01, 2021
Date Reported	Jul 07, 2021

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.*

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Project Name UNICORN
Project ID
Date Sampled Jun 28, 2021 to Jul 01, 2021
Report 807316-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
GW230_0.6	21-JI01434	Jun 28, 2021	Approximate Sample 581g 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.
GW230_3.9	21-JI01435	Jun 28, 2021	Approximate Sample 401g Sample consisted of: Brown coarse-grained sandy soil, plaster like material, glass fragments, coal, shell fragments and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW216_1.0	21-JI01436	Jun 28, 2021	Approximate Sample 419g 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.
GW216_3.0	21-JI01437	Jun 28, 2021	Approximate Sample 665g 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.
GW207_0.6	21-JI01438	Jun 28, 2021	Approximate Sample 718g Sample consisted of: Brown coarse-grained sandy soil, cement, plaster material, sand stone, bitumen, coal, organic debris and rocks	Chrysotile, amosite and crocidolite asbestos detected in weathered fibre cement fragments. Approximate raw weight of asbestos containing material = 0.58g Total estimated asbestos content in the sample = 0.17g* Total estimated asbestos concentration = 0.024% w/w* Organic fibre detected. No trace asbestos detected.
DUP04_210628	21-JI01439	Jun 28, 2021	Approximate Sample 476g 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.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP202_0.3	21-Jl01440	Jun 28, 2021	Approximate Sample 586g Sample consisted of: Brown coarse-grained sandy soil, cement, plaster material, wood chips, bitumen, organic debris and rocks	Chrysotile asbestos detected in bitumen-like material. Approximate raw weight of asbestos containing material = 0.011g Total estimated asbestos content in the sample = 0.00057g* Total estimated asbestos concentration = 0.000097% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP202_0.8	21-Jl01441	Jun 28, 2021	Approximate Sample 662g Sample consisted of: Brown coarse-grained sandy soil, bitumen, coal, cement, plaster material, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP202_1.2	21-Jl01442	Jun 28, 2021	Approximate Sample 569g Sample consisted of: Brown coarse-grained sandy soil, bitumen, coal, plaster, wood chips, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP202_1.8	21-Jl01443	Jun 28, 2021	Approximate Sample 679g Sample consisted of: Brown coarse-grained sandy soil, cement, plaster, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW207_3.0	21-Jl01444	Jun 29, 2021	Approximate Sample 633g 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.
GW206_2.5	21-Jl01445	Jun 29, 2021	Approximate Sample 490g 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.
GW206_4.0	21-Jl01446	Jun 29, 2021	Approximate Sample 678g 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.
GW233_2.5	21-Jl01447	Jun 29, 2021	Approximate Sample 377g Sample consisted of: Brown gss, bitumen, cement, organic debris and rocks	Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of asbestos containing material = 0.43g* Total estimated asbestos content in the sample = 0.13g* Total estimated asbestos concentration = 0.034% w/w* Organic fibre detected. No trace asbestos detected.
GW233_4.0	21-Jl01448	Jun 29, 2021	Approximate Sample 634g Sample consisted of: Brown coarse-grained sandy soil and rocks	Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of asbestos containing material = 0.10g* Total estimated asbestos content in the sample = 0.021g* Total estimated asbestos concentration = 0.0033% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
GW235_0.3	21-JI01449	Jun 29, 2021	Approximate Sample 255g Sample consisted of: Brown coarse-grained sandy soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW235_3.0	21-JI01450	Jun 29, 2021	Approximate Sample 580g Sample consisted of: Brown coarse-grained sandy soil and rocks	Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of asbestos containing material = 8.7g Total estimated asbestos content in the sample = 0.87g* Total estimated asbestos concentration = 0.15% w/w* Organic fibre detected. No trace asbestos detected.
GW219_2.5	21-JI01451	Jun 30, 2021	Approximate Sample 607g 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.
GW219_4.0	21-JI01452	Jun 30, 2021	Approximate Sample 566g 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.
GW222_2.0	21-JI01453	Jun 30, 2021	Approximate Sample 468g Sample consisted of: Brown coarse-grained sandy soil, shell fragments and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW222_4.0	21-JI01454	Jun 30, 2021	Approximate Sample 601g 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.
GW223_0.2	21-JI01455	Jun 30, 2021	Approximate Sample 728g Sample consisted of: Brown coarse-grained sandy soil, sand stone and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW223_3.0	21-JI01456	Jun 30, 2021	Approximate Sample 798g Sample consisted of: Brown coarse-grained sandy soil, corroded metal, bitumen and rocks	Chrysotile asbestos detected in weathered fibre insulation-like material. Approximate raw weight of asbestos containing material = 0.17g* Total estimated asbestos content in the sample = 0.14g* Total estimated asbestos concentration = 0.029% w/w* Organic fibre detected. No trace asbestos detected.
GW225_0.5	21-JI01457	Jun 30, 2021	Approximate Sample 771g Sample consisted of: Brown fine-grained sandy soil and ash like material	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW225_3.0	21-JI01458	Jun 30, 2021	Approximate Sample 679g 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.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
DUP05_210630	21-Jl01459	Jun 30, 2021	Approximate Sample 744g 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.
TP218_0.4	21-Jl01460	Jun 30, 2021	Approximate Sample 679g Sample consisted of: Brown fine-grained sandy soil, ash, organic debris, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP218_1.2	21-Jl01461	Jun 30, 2021	Approximate Sample 750g Sample consisted of: Brown fine-grained sandy soil, bitumen, ash, glass fragments, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW228_3.0	21-Jl01462	Jul 01, 2021	Approximate Sample 380g Sample consisted of: Brown fine-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
GW228_4.0	21-Jl01463	Jul 01, 2021	Approximate Sample 478g Sample consisted of: Brown fine-grained sandy soil, shell fragments and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH220_0.4	21-Jl01464	Jul 01, 2021	Approximate Sample 779g Sample consisted of: Brown coarse-grained sandy soil, sand stone 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 is reported.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 01, 2021	Indefinite

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NATA # 1261 Site # 18217

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Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	TRIP SPIKE	Jul 01, 2021		Soil	S21-Jl01431									X
2	TRIP BLANK	Jul 01, 2021		Soil	S21-Jl01433						X			
3	GW230_0.6	Jun 28, 2021		Soil	S21-Jl01434	X	X		X	X		X	X	
4	GW230_3.9	Jun 28, 2021		Soil	S21-Jl01435	X	X		X	X		X	X	
5	GW216_1.0	Jun 28, 2021		Soil	S21-Jl01436	X	X		X	X		X	X	
6	GW216_3.0	Jun 28, 2021		Soil	S21-Jl01437	X	X		X	X		X	X	
7	GW207_0.6	Jun 28, 2021		Soil	S21-Jl01438	X	X		X	X		X	X	
8	DUP04_210628	Jun 28, 2021		Soil	S21-Jl01439	X	X		X	X		X	X	
9	TP202_0.3	Jun 28, 2021		Soil	S21-Jl01440	X	X		X	X			X	

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Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
10	TP202_0.8	Jun 28, 2021		Soil	S21-Jl01441	X	X		X	X		X	X	
11	TP202_1.2	Jun 28, 2021		Soil	S21-Jl01442	X	X		X	X		X	X	
12	TP202_1.8	Jun 28, 2021		Soil	S21-Jl01443	X	X		X	X		X	X	
13	GW207_3.0	Jun 29, 2021		Soil	S21-Jl01444	X	X		X	X		X	X	
14	GW206_2.5	Jun 29, 2021		Soil	S21-Jl01445	X	X		X	X		X	X	
15	GW206_4.0	Jun 29, 2021		Soil	S21-Jl01446	X	X		X	X		X	X	
16	GW233_2.5	Jun 29, 2021		Soil	S21-Jl01447	X	X		X	X		X	X	
17	GW233_4.0	Jun 29, 2021		Soil	S21-Jl01448	X	X		X	X		X	X	
18	GW235_0.3	Jun 29, 2021		Soil	S21-Jl01449	X	X		X	X		X	X	
19	GW235_3.0	Jun 29, 2021		Soil	S21-Jl01450	X	X		X	X		X	X	
20	GW219_2.5	Jun 30, 2021		Soil	S21-Jl01451	X	X		X	X		X	X	

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External Laboratory														
21	GW219_4.0	Jun 30, 2021		Soil	S21-Jl01452	X	X		X	X		X	X	
22	GW222_2.0	Jun 30, 2021		Soil	S21-Jl01453	X	X		X	X		X	X	
23	GW222_4.0	Jun 30, 2021		Soil	S21-Jl01454	X	X		X	X		X	X	
24	GW223_0.2	Jun 30, 2021		Soil	S21-Jl01455	X	X		X	X		X	X	
25	GW223_3.0	Jun 30, 2021		Soil	S21-Jl01456	X	X		X	X		X	X	
26	GW225_0.5	Jun 30, 2021		Soil	S21-Jl01457	X	X		X	X		X	X	
27	GW225_3.0	Jun 30, 2021		Soil	S21-Jl01458	X	X		X	X		X	X	
28	DUP05_210630	Jun 30, 2021		Soil	S21-Jl01459	X	X		X	X		X	X	
29	TP218_0.4	Jun 30, 2021		Soil	S21-Jl01460	X	X		X	X		X	X	
30	TP218_1.2	Jun 30, 2021		Soil	S21-Jl01461	X	X		X	X		X	X	
31	GW228_3.0	Jul 01, 2021		Soil	S21-Jl01462	X	X		X	X		X	X	

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Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
32	GW228_4.0	Jul 01, 2021		Soil	S21-Jl01463	X	X		X	X		X	X	
33	BH220_0.4	Jul 01, 2021		Soil	S21-Jl01464	X	X		X	X		X	X	
34	GW207 ACM	Jul 01, 2021		Building Materials	S21-Jl01559			X						
Test Counts						31	31	1	31	31	1	30	31	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:

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.

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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
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Attention: **Ian Batterley**

Report **807316-S**
Project name UNICORN
Received Date Jul 01, 2021

Client Sample ID			**TRIP SPIKE**	**TRIP BLANK**	**GW230_0.6**	**GW230_3.9**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-JI01431**	**S21-JI01433**	**S21-JI01434**	**S21-JI01435**
Date Sampled			**Jul 01, 2021**	**Jul 01, 2021**	**Jun 28, 2021**	**Jun 28, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
Naphthalene	1	%	79	-	-	-
BTEX						
Benzene	1	%	91	-	-	-
Ethylbenzene	1	%	85	-	-	-
m&p-Xylenes	1	%	84	-	-	-
o-Xylene	1	%	84	-	-	-
Toluene	1	%	87	-	-	-
Xylenes - Total	1	%	84	-	-	-
4-Bromofluorobenzene (surr.)	1	%	101	-	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	< 50
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
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	0.2	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	0.3	< 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	%	-	144	103	89
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

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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	-	-	0.3	< 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	-	-	0.2	< 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

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	-	-	103	89
Toluene-d8 (surr.)	1	%	-	-	117	113
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	%	-	-	117	129
p-Terphenyl-d14 (surr.)	1	%	-	-	121	141
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Nitrophenol	1	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	-	123	121
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	-	-	117	129
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	-	-	< 1	< 1
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-Tribromophenol (surr.)	1	%	-	-	85	95
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
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

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
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

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
Nitrobenzene-d5 (surr.)	1	%	-	-	132	139
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
Phenol-d6 (surr.)	1	%	-	-	123	121
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
Chromium (hexavalent)	1	mg/kg	-	-	< 1	< 1
% Moisture	1	%	-	-	11	23
Heavy Metals						
Arsenic	2	mg/kg	-	-	< 2	8.4
Cadmium	0.4	mg/kg	-	-	< 0.4	< 0.4
Chromium	5	mg/kg	-	-	23	26
Copper	5	mg/kg	-	-	17	160
Lead	5	mg/kg	-	-	73	48
Mercury	0.1	mg/kg	-	-	0.2	< 0.1
Nickel	5	mg/kg	-	-	9.0	28
Zinc	5	mg/kg	-	-	47	240
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	%	-	-	82	78
13C5-PFPeA (surr.)	1	%	-	-	85	91
13C5-PFHxA (surr.)	1	%	-	-	85	80
13C4-PFHpA (surr.)	1	%	-	-	84	82
13C8-PFOA (surr.)	1	%	-	-	79	77
13C5-PFNA (surr.)	1	%	-	-	78	78
13C6-PFDA (surr.)	1	%	-	-	81	69
13C2-PFUnDA (surr.)	1	%	-	-	81	75
13C2-PFDoDA (surr.)	1	%	-	-	92	73
13C2-PFTeDA (surr.)	1	%	-	-	98	96

Client Sample ID			TRIP SPIKE	TRIP BLANK	GW230_0.6	GW230_3.9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01431	S21-Jl01433	S21-Jl01434	S21-Jl01435
Date Sampled			Jul 01, 2021	Jul 01, 2021	Jun 28, 2021	Jun 28, 2021
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	%	-	-	84	75
D3-N-MeFOSA (surr.)	1	%	-	-	88	80
D5-N-EtFOSA (surr.)	1	%	-	-	96	84
D7-N-MeFOSE (surr.)	1	%	-	-	85	85
D9-N-EtFOSE (surr.)	1	%	-	-	98	84
D5-N-EtFOSAA (surr.)	1	%	-	-	85	77
D3-N-MeFOSAA (surr.)	1	%	-	-	81	82
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	%	-	-	86	85
18O2-PFHxS (surr.)	1	%	-	-	84	95
13C8-PFOS (surr.)	1	%	-	-	96	82
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 FTS (surr.)	1	%	-	-	66	70
13C2-6:2 FTSA (surr.)	1	%	-	-	70	67
13C2-8:2 FTSA (surr.)	1	%	-	-	69	59
13C2-10:2 FTSA (surr.)	1	%	-	-	114	95
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	-	-	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	-	-	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	-	-	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	-	-	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	-	-	< 50	< 50

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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
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	%	93	82	94	94
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
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

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	93	82	94	94
Toluene-d8 (surr.)	1	%	111	98	114	111
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	150	111	141	103
p-Terphenyl-d14 (surr.)	1	%	INT	122	INT	110
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
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	INT	112	141	102
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	150	111	141	103
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	103	65	74	66
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
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

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
Nitrobenzene-d5 (surr.)	1	%	INT	123	INT	114
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
Phenol-d6 (surr.)	1	%	INT	112	141	102
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	13	26	7.0	11
Heavy Metals						
Arsenic	2	mg/kg	2.1	4.0	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	30	23	28	22
Copper	5	mg/kg	45	< 5	32	18
Lead	5	mg/kg	61	10	55	77

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01436	S21-Jl01437	S21-Jl01438	S21-Jl01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	1.2	< 0.1	< 0.1	0.2
Nickel	5	mg/kg	17	7.9	11	8.3
Zinc	5	mg/kg	110	10	94	46
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	%	87	82	83	84
13C5-PFPeA (surr.)	1	%	90	89	95	93
13C5-PFHxA (surr.)	1	%	92	83	86	87
13C4-PFHpA (surr.)	1	%	94	86	90	87
13C8-PFOA (surr.)	1	%	90	83	85	79
13C5-PFNA (surr.)	1	%	89	79	83	85
13C6-PFDA (surr.)	1	%	96	82	89	78
13C2-PFUnDA (surr.)	1	%	96	75	82	79
13C2-PFDoDA (surr.)	1	%	106	82	78	73
13C2-PFTeDA (surr.)	1	%	144	108	114	94
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	%	99	85	90	84
D3-N-MeFOSA (surr.)	1	%	95	82	95	81
D5-N-EtFOSA (surr.)	1	%	103	89	99	90
D7-N-MeFOSE (surr.)	1	%	89	77	86	99
D9-N-EtFOSE (surr.)	1	%	104	90	99	93
D5-N-EtFOSAA (surr.)	1	%	108	77	92	72
D3-N-MeFOSAA (surr.)	1	%	92	80	77	81
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

Client Sample ID			GW216_1.0	GW216_3.0	GW207_0.6	DUP04_210628
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-JI01436	S21-JI01437	S21-JI01438	S21-JI01439
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	92	91	84	81
18O2-PFHxS (surr.)	1	%	97	89	83	90
13C8-PFOS (surr.)	1	%	108	96	85	95
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 FTS (surr.)	1	%	79	77	74	69
13C2-6:2 FTSA (surr.)	1	%	78	79	76	66
13C2-8:2 FTSA (surr.)	1	%	92	76	78	75
13C2-10:2 FTSA (surr.)	1	%	183	85	123	85
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			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-JI01440	S21-JI01441	S21-JI01442	S21-JI01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	54	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	63	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	117	< 50	< 50	< 50
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			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
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	%	90	85	95	91
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
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

Client Sample ID			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-JI01440	S21-JI01441	S21-JI01442	S21-JI01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	95	91
Toluene-d8 (surr.)	1	%	-	102	113	108
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	%	111	147	140	136
p-Terphenyl-d14 (surr.)	1	%	78	INT	INT	150
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			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	90	INT	148	141
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	-	147	140	136
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	-	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	-	77	INT	123
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

Client Sample ID			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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	< 1	< 1
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

Client Sample ID			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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	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
Nitrobenzene-d5 (surr.)	1	%	-	INT	INT	INT
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
Phenol-d6 (surr.)	1	%	-	INT	148	141
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	7.5	6.6	3.9	14
Heavy Metals						
Arsenic	2	mg/kg	5.5	< 2	< 2	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	27	20	19	17
Copper	5	mg/kg	31	12	6.1	< 5
Lead	5	mg/kg	67	17	11	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	21	13	7.3	5.1
Zinc	5	mg/kg	240	68	49	33
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	%	83	84	87	84

Client Sample ID			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	91	92	87	84
13C5-PFHxA (surr.)	1	%	89	82	92	86
13C4-PFHpA (surr.)	1	%	93	88	96	89
13C8-PFOA (surr.)	1	%	89	82	88	82
13C5-PFNA (surr.)	1	%	83	75	87	85
13C6-PFDA (surr.)	1	%	83	79	83	76
13C2-PFUnDA (surr.)	1	%	86	77	79	79
13C2-PFDoDA (surr.)	1	%	80	83	78	74
13C2-PFTeDA (surr.)	1	%	99	97	103	88
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	%	79	85	90	84
D3-N-MeFOSA (surr.)	1	%	83	88	96	94
D5-N-EtFOSA (surr.)	1	%	84	90	95	93
D7-N-MeFOSE (surr.)	1	%	82	96	96	82
D9-N-EtFOSE (surr.)	1	%	86	88	94	89
D5-N-EtFOSAA (surr.)	1	%	76	89	81	75
D3-N-MeFOSAA (surr.)	1	%	79	74	75	72
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	30
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	5.9
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	< 5	53
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	93	84	87	84
18O2-PFHxS (surr.)	1	%	91	92	95	86
13C8-PFOS (surr.)	1	%	80	98	94	84
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 FTS (surr.)	1	%	84	73	74	73
13C2-6:2 FTSA (surr.)	1	%	79	78	76	68

Client Sample ID			TP202_0.3	TP202_0.8	TP202_1.2	TP202_1.8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01440	S21-Jl01441	S21-Jl01442	S21-Jl01443
Date Sampled			Jun 28, 2021	Jun 28, 2021	Jun 28, 2021	Jun 28, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-8:2 FTSA (surr.)	1	%	86	66	74	75
13C2-10:2 FTSA (surr.)	1	%	91	92	89	98
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	83
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	53
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	83
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	83
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	88.9

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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
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	%	97	78	89	77
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

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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	%	97	78	89	77
Toluene-d8 (surr.)	1	%	122	82	102	88

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
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	%	139	119	125	110
p-Terphenyl-d14 (surr.)	1	%	INT	130	138	116
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
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-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
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	140	121	120	109
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	139	119	125	110
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	< 1	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	129	68	104	126
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	< 1	< 1	< 1	< 1
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

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	INT	132	138	122
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
Phenol-d6 (surr.)	1	%	140	121	120	109
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	20	18	18	24
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	8.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.6
Chromium	5	mg/kg	22	18	19	35
Copper	5	mg/kg	24	< 5	< 5	280
Lead	5	mg/kg	75	< 5	< 5	590
Mercury	0.1	mg/kg	0.4	< 0.1	< 0.1	0.3
Nickel	5	mg/kg	8.7	5.2	5.6	43
Zinc	5	mg/kg	47	< 5	< 5	4100
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	%	81	81	81	75
13C5-PFPeA (surr.)	1	%	98	85	83	77
13C5-PFHxA (surr.)	1	%	86	83	82	75
13C4-PFHpA (surr.)	1	%	84	85	83	78
13C8-PFOA (surr.)	1	%	78	80	82	72
13C5-PFNA (surr.)	1	%	81	81	77	77
13C6-PFDA (surr.)	1	%	81	81	78	72
13C2-PFUnDA (surr.)	1	%	73	74	72	72
13C2-PFDoDA (surr.)	1	%	78	80	73	67
13C2-PFTeDA (surr.)	1	%	87	83	87	75

Client Sample ID			GW207_3.0	GW206_2.5	GW206_4.0	GW233_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01444	S21-Jl01445	S21-Jl01446	S21-Jl01447
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 29, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	76	84	81	77
D3-N-MeFOSA (surr.)	1	%	81	90	105	78
D5-N-EtFOSA (surr.)	1	%	79	85	96	71
D7-N-MeFOSE (surr.)	1	%	74	83	76	76
D9-N-EtFOSE (surr.)	1	%	81	80	87	78
D5-N-EtFOSAA (surr.)	1	%	81	63	70	59
D3-N-MeFOSAA (surr.)	1	%	70	88	78	66
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	%	87	78	81	73
18O2-PFHxS (surr.)	1	%	86	85	77	82
13C8-PFOS (surr.)	1	%	91	84	75	76
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 FTS (surr.)	1	%	79	69	69	64
13C2-6:2 FTSA (surr.)	1	%	75	74	73	68
13C2-8:2 FTSA (surr.)	1	%	73	72	66	78
13C2-10:2 FTSA (surr.)	1	%	120	110	74	104
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	< 5	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	< 10	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 100	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 250	150	< 50
TRH C29-C36	50	mg/kg	< 50	< 250	84	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 250	234	< 50
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	2.3	< 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	< 250	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 250	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 500	200	< 100
TRH >C34-C40	100	mg/kg	< 100	< 500	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 500	200	< 100
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	79	90	75	78
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
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

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	79	90	75	78
Toluene-d8 (surr.)	1	%	94	103	94	97
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	22	< 1	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	22	1.3	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	22	2.5	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Anthracene	0.5	mg/kg	< 0.5	11	< 1	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	17	1.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	14	< 1	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	12	< 1	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	11	< 1	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	14	< 1	< 0.5
Chrysene	0.5	mg/kg	< 0.5	18	1.8	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	2.8	< 1	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	48	3.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	2.4	< 1	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	8.3	< 1	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	39	3.2	< 0.5
Pyrene	0.5	mg/kg	< 0.5	46	3.4	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	243.5	13.6	< 0.5
2-Fluorobiphenyl (surr.)	1	%	96	84	97	107
p-Terphenyl-d14 (surr.)	1	%	104	85	89	111
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 2	< 2	< 1
Pentachlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 2	< 2	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 50	< 50	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
2-Nitrophenol	1	mg/kg	< 1	< 2	< 2	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 1	< 1	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 2	< 2	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 2	< 2	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
Dinoseb	20	mg/kg	< 20	< 50	< 50	< 20
Phenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Phenol-d6 (surr.)	1	%	94	94	76	112
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 50	< 50	< 20
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	22	< 1	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	22	1.3	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	22	2.5	1.2
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1-Naphthylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2-Chlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2-Fluorobiphenyl (surr.)	1	%	96	84	97	107
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 1	< 1	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	< 1
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 2	< 2	< 1
2-Picoline	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
2.4.6-Tribromophenol (surr.)	1	%	68	INT	INT	90
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 2	< 2	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 1	< 1	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 2	< 2	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4-Nitrophenol	5	mg/kg	< 5	< 10	< 10	< 5
4.4'-DDD	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4.4'-DDE	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
a-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Acenaphthene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Acetophenone	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Aldrin	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Aniline	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Anthracene	0.5	mg/kg	< 0.5	11	< 1	< 0.5
b-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	17	1.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	14	< 1	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	12	< 1	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	11	< 1	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	14	< 1	< 0.5
Benzyl chloride	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Chrysene	0.5	mg/kg	< 0.5	18	1.8	< 0.5
d-BHC	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	2.8	< 1	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Dibenzofuran	0.5	mg/kg	< 0.5	< 2	< 1	< 0.5
Dieldrin	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Diethyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Diphenylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endosulfan I	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endosulfan II	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endrin	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endrin aldehyde	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Endrin ketone	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	48	3.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	2.4	< 1	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Heptachlor	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	8.3	< 1	< 0.5
Methoxychlor	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Nitrobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Nitrobenzene-d5 (surr.)	1	%	108	88	106	119
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Pentachlorophenol	1	mg/kg	< 1	< 2	< 2	< 1
Phenanthrene	0.5	mg/kg	< 0.5	39	3.2	< 0.5
Phenol	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Phenol-d6 (surr.)	1	%	94	94	76	112
Pronamide	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Pyrene	0.5	mg/kg	< 0.5	46	3.4	< 0.5
Trifluralin	0.5	mg/kg	< 0.5	< 1	< 1	< 0.5
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	26	13	21	18
Heavy Metals						
Arsenic	2	mg/kg	5.2	2.7	4.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	31	28	20
Copper	5	mg/kg	100	55	75	8.2
Lead	5	mg/kg	97	45	310	14

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01448	S21-Jl01449	S21-Jl01450	S21-Jl01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	0.1	0.4	< 0.1
Nickel	5	mg/kg	20	19	45	6.0
Zinc	5	mg/kg	1800	85	14000	30
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	%	78	84	75	82
13C5-PFPeA (surr.)	1	%	85	94	78	79
13C5-PFHxA (surr.)	1	%	83	87	81	82
13C4-PFHpA (surr.)	1	%	83	85	80	82
13C8-PFOA (surr.)	1	%	80	85	78	79
13C5-PFNA (surr.)	1	%	75	82	84	87
13C6-PFDA (surr.)	1	%	73	90	84	72
13C2-PFUnDA (surr.)	1	%	69	95	95	70
13C2-PFDoDA (surr.)	1	%	69	99	80	79
13C2-PFTeDA (surr.)	1	%	89	122	116	90
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	%	75	98	87	86
D3-N-MeFOSA (surr.)	1	%	70	86	87	88
D5-N-EtFOSA (surr.)	1	%	82	92	84	97
D7-N-MeFOSE (surr.)	1	%	73	83	77	79
D9-N-EtFOSE (surr.)	1	%	78	85	87	93
D5-N-EtFOSAA (surr.)	1	%	85	85	97	75
D3-N-MeFOSAA (surr.)	1	%	84	89	85	74
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

Client Sample ID			GW233_4.0	GW235_0.3	GW235_3.0	GW219_2.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-JI01448	S21-JI01449	S21-JI01450	S21-JI01451
Date Sampled			Jun 29, 2021	Jun 29, 2021	Jun 29, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	82	85	83	82
18O2-PFHxS (surr.)	1	%	70	89	79	77
13C8-PFOS (surr.)	1	%	78	103	90	85
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 FTS (surr.)	1	%	64	76	73	69
13C2-6:2 FTSA (surr.)	1	%	71	73	71	72
13C2-8:2 FTSA (surr.)	1	%	57	79	74	72
13C2-10:2 FTSA (surr.)	1	%	62	100	97	71
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			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-JI01452	S21-JI01453	S21-JI01454	S21-JI01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
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	%	82	81	84	81
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
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

Client Sample ID			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	82	81	84	81
Toluene-d8 (surr.)	1	%	111	95	105	105
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	%	108	108	99	103
p-Terphenyl-d14 (surr.)	1	%	114	114	105	108
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			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
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-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 1
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	110	102	101	112
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	108	108	99	103
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	< 1	< 1	< 1	< 1
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	< 1
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-Tribromophenol (surr.)	1	%	64	69	77	59
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

Client Sample ID			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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	< 1	< 1	< 1	< 1
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

Client Sample ID			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
Nitrobenzene-d5 (surr.)	1	%	119	121	109	119
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
Phenol-d6 (surr.)	1	%	110	102	101	112
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 2
% Moisture	1	%	17	30	23	17
Heavy Metals						
Arsenic	2	mg/kg	< 2	13	21	5.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	5.9	13
Copper	5	mg/kg	< 5	44	52	58
Lead	5	mg/kg	< 5	12	20	75
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.3
Nickel	5	mg/kg	< 5	< 5	6.7	12
Zinc	5	mg/kg	14	19	32	110
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	%	85	85	84	82

Client Sample ID			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	92	86	86	84
13C5-PFHxA (surr.)	1	%	87	87	88	81
13C4-PFHpA (surr.)	1	%	90	88	91	85
13C8-PFOA (surr.)	1	%	80	80	91	81
13C5-PFNA (surr.)	1	%	86	87	88	85
13C6-PFDA (surr.)	1	%	76	76	92	84
13C2-PFUnDA (surr.)	1	%	76	74	99	79
13C2-PFDoDA (surr.)	1	%	78	73	96	80
13C2-PFTeDA (surr.)	1	%	88	92	108	97
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	%	81	82	77	90
D3-N-MeFOSA (surr.)	1	%	80	85	74	86
D5-N-EtFOSA (surr.)	1	%	79	92	80	87
D7-N-MeFOSE (surr.)	1	%	83	80	63	80
D9-N-EtFOSE (surr.)	1	%	84	87	73	89
D5-N-EtFOSAA (surr.)	1	%	76	74	123	86
D3-N-MeFOSAA (surr.)	1	%	75	75	103	84
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	%	88	88	92	80
18O2-PFHxS (surr.)	1	%	83	94	103	71
13C8-PFOS (surr.)	1	%	92	82	108	88
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 FTS (surr.)	1	%	74	79	107	66
13C2-6:2 FTSA (surr.)	1	%	65	73	95	61

Client Sample ID			GW219_4.0	GW222_2.0	GW222_4.0	GW223_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01452	S21-Jl01453	S21-Jl01454	S21-Jl01455
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-8:2 FTSA (surr.)	1	%	74	70	112	75
13C2-10:2 FTSA (surr.)	1	%	72	83	INT	85
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			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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
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	%	103	83	81	81
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

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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	%	103	83	81	81
Toluene-d8 (surr.)	1	%	125	110	96	110

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
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	%	111	97	108	104
p-Terphenyl-d14 (surr.)	1	%	121	101	115	109
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
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-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 1	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	115	72	99	88
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	111	97	108	104
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	< 1	< 1	< 1	< 1
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	< 1	< 1	< 1	< 1
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-Tribromophenol (surr.)	1	%	56	INT	53	51
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	< 1	< 1	< 1	< 1
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

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	125	111	123	117
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
Phenol-d6 (surr.)	1	%	115	72	99	88
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
Chromium (hexavalent)	1	mg/kg	< 1	< 2	< 1	< 1
% Moisture	1	%	33	2.2	16	2.1
Heavy Metals						
Arsenic	2	mg/kg	23	< 2	2.7	< 2
Cadmium	0.4	mg/kg	22	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	88	< 5	< 5	< 5
Copper	5	mg/kg	170	< 5	< 5	< 5
Lead	5	mg/kg	320	< 5	< 5	< 5
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	35	< 5	< 5	< 5
Zinc	5	mg/kg	1900	< 5	6.7	< 5
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	%	85	84	85	91
13C5-PFPeA (surr.)	1	%	86	94	80	95
13C5-PFHxA (surr.)	1	%	89	85	84	93
13C4-PFHpA (surr.)	1	%	93	80	90	101
13C8-PFOA (surr.)	1	%	90	76	79	89
13C5-PFNA (surr.)	1	%	89	78	83	90
13C6-PFDA (surr.)	1	%	92	70	79	92
13C2-PFUnDA (surr.)	1	%	95	66	80	81
13C2-PFDoDA (surr.)	1	%	116	66	78	78
13C2-PFTeDA (surr.)	1	%	115	91	85	100

Client Sample ID			GW223_3.0	GW225_0.5	GW225_3.0	DUP05_210630
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01456	S21-Jl01457	S21-Jl01458	S21-Jl01459
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jun 30, 2021	Jun 30, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	77	73	89	95
D3-N-MeFOSA (surr.)	1	%	86	83	91	85
D5-N-EtFOSA (surr.)	1	%	82	83	90	107
D7-N-MeFOSE (surr.)	1	%	69	74	86	89
D9-N-EtFOSE (surr.)	1	%	86	82	86	102
D5-N-EtFOSAA (surr.)	1	%	119	74	75	80
D3-N-MeFOSAA (surr.)	1	%	110	77	74	84
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	%	91	79	86	85
18O2-PFHxS (surr.)	1	%	91	79	83	100
13C8-PFOS (surr.)	1	%	105	76	90	93
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 FTS (surr.)	1	%	115	65	66	73
13C2-6:2 FTSA (surr.)	1	%	109	68	70	73
13C2-8:2 FTSA (surr.)	1	%	131	62	65	78
13C2-10:2 FTSA (surr.)	1	%	INT	97	84	95
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			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	81	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	81	< 50
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
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	0.6	0.2	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	0.8	0.3	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	0.3	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	1.1	0.4	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	83	81	84	99
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
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

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	0.8	0.3	< 0.2	< 0.2
Methylene Chloride	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene	0.1	mg/kg	0.3	< 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	0.6	0.2	< 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	1.1	0.4	< 0.3	< 0.3
Total MAH*	0.5	mg/kg	1.8	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	%	83	81	84	99
Toluene-d8 (surr.)	1	%	105	111	66	103
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	100	110	102	109
p-Terphenyl-d14 (surr.)	1	%	109	103	106	117
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
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-Nitrophenol	1	mg/kg	< 1	< 1	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 1	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
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
Phenol-d6 (surr.)	1	%	53	54	104	117
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	< 20
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	100	110	102	109
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 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	< 1	< 1	< 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-Tribromophenol (surr.)	1	%	INT	INT	94	78
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	< 1	< 1	< 0.5	< 0.5
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

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
Nitrobenzene-d5 (surr.)	1	%	114	117	106	116
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
Phenol-d6 (surr.)	1	%	53	54	104	117
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	5.0	6.4	32	30
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	8.9	6.1
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	< 5	17	8.4
Copper	5	mg/kg	< 5	< 5	49	13
Lead	5	mg/kg	15	< 5	170	35

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	15	< 5
Zinc	5	mg/kg	18	13	170	74
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	%	92	89	85	71
13C5-PFPeA (surr.)	1	%	92	83	97	76
13C5-PFHxA (surr.)	1	%	90	92	94	75
13C4-PFHpA (surr.)	1	%	99	95	105	75
13C8-PFOA (surr.)	1	%	87	85	98	75
13C5-PFNA (surr.)	1	%	91	92	110	76
13C6-PFDA (surr.)	1	%	88	79	107	80
13C2-PFUnDA (surr.)	1	%	76	79	101	75
13C2-PFDoDA (surr.)	1	%	85	85	122	78
13C2-PFTeDA (surr.)	1	%	106	91	132	90
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	%	90	98	97	75
D3-N-MeFOSA (surr.)	1	%	98	85	90	70
D5-N-EtFOSA (surr.)	1	%	102	100	87	76
D7-N-MeFOSE (surr.)	1	%	95	89	72	64
D9-N-EtFOSE (surr.)	1	%	97	97	76	79
D5-N-EtFOSAA (surr.)	1	%	80	79	176	61
D3-N-MeFOSAA (surr.)	1	%	87	69	122	64
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

Client Sample ID			TP218_0.4	TP218_1.2	GW228_3.0	GW228_4.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl01460	S21-Jl01461	S21-Jl01462	S21-Jl01463
Date Sampled			Jun 30, 2021	Jun 30, 2021	Jul 01, 2021	Jul 01, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5	< 5	5.9	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	93	85	95	80
18O2-PFHxS (surr.)	1	%	89	86	108	74
13C8-PFOS (surr.)	1	%	96	87	93	72
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 FTS (surr.)	1	%	73	76	165	52
13C2-6:2 FTSA (surr.)	1	%	70	77	INT	53
13C2-8:2 FTSA (surr.)	1	%	71	75	INT	68
13C2-10:2 FTSA (surr.)	1	%	90	86	INT	100
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	5.9	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	5.9	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	5.9	< 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			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
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			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
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	%	101
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
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

Client Sample ID			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Volatile Organics			
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	%	101
Toluene-d8 (surr.)	1	%	88
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	%	106
p-Terphenyl-d14 (surr.)	1	%	114
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1

Client Sample ID			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1	mg/kg	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	114
Total Non-Halogenated Phenol*	20	mg/kg	< 20
Semivolatile Organics			
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
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-Fluorobiphenyl (surr.)	1	%	106
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	1	mg/kg	< 1
2-Nitrophenol	1	mg/kg	< 1
2-Picoline	0.5	mg/kg	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5
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-Tribromophenol (surr.)	1	%	INT
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4

Client Sample ID			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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	1	mg/kg	< 1
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
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	5	mg/kg	< 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

Client Sample ID			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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	1	mg/kg	< 1
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
Nitrobenzene-d5 (surr.)	1	%	113
Pentachlorobenzene	0.5	mg/kg	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 0.5
Pentachlorophenol	1	mg/kg	< 1
Phenanthrene	0.5	mg/kg	< 0.5
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	114
Pronamide	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Trifluralin	0.5	mg/kg	< 0.5
Chromium (hexavalent)	1	mg/kg	< 1
% Moisture	1	%	12
Heavy Metals			
Arsenic	2	mg/kg	3.6
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Copper	5	mg/kg	< 5
Lead	5	mg/kg	12
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	6.2
Zinc	5	mg/kg	< 5
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5
Perfluoropentanoic acid (PFPeA)[N11]	5	ug/kg	< 5
Perfluorohexanoic acid (PFHxA)[N11]	5	ug/kg	< 5
Perfluoroheptanoic acid (PFHpA)[N11]	5	ug/kg	< 5
Perfluorooctanoic acid (PFOA)[N11]	5	ug/kg	< 5
Perfluorononanoic acid (PFNA)[N11]	5	ug/kg	< 5
Perfluorodecanoic acid (PFDA)[N11]	5	ug/kg	< 5
Perfluoroundecanoic acid (PFUnDA)[N11]	5	ug/kg	< 5
Perfluorododecanoic acid (PFDoDA)[N11]	5	ug/kg	< 5
Perfluorotridecanoic acid (PFTrDA)[N15]	5	ug/kg	< 5
Perfluorotetradecanoic acid (PFTeDA)[N11]	5	ug/kg	< 5
13C4-PFBA (surr.)	1	%	83

Client Sample ID			BH220_0.4
Sample Matrix			Soil
Eurofins Sample No.			S21-Jl01464
Date Sampled			Jul 01, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
13C5-PFPeA (surr.)	1	%	91
13C5-PFHxA (surr.)	1	%	86
13C4-PFHpA (surr.)	1	%	87
13C8-PFOA (surr.)	1	%	84
13C5-PFNA (surr.)	1	%	84
13C6-PFDA (surr.)	1	%	72
13C2-PFUnDA (surr.)	1	%	77
13C2-PFDoDA (surr.)	1	%	83
13C2-PFTeDA (surr.)	1	%	101
Perfluoroalkyl sulfonamido substances			
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10
13C8-FOSA (surr.)	1	%	84
D3-N-MeFOSA (surr.)	1	%	86
D5-N-EtFOSA (surr.)	1	%	92
D7-N-MeFOSE (surr.)	1	%	81
D9-N-EtFOSE (surr.)	1	%	83
D5-N-EtFOSAA (surr.)	1	%	75
D3-N-MeFOSAA (surr.)	1	%	72
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	5	ug/kg	< 5
Perfluorononanesulfonic acid (PFNS)[N15]	5	ug/kg	< 5
Perfluoropropanesulfonic acid (PFPrS)[N15]	5	ug/kg	< 5
Perfluoropentanesulfonic acid (PFPeS)[N15]	5	ug/kg	< 5
Perfluorohexanesulfonic acid (PFHxS)[N11]	5	ug/kg	< 5
Perfluoroheptanesulfonic acid (PFHpS)[N15]	5	ug/kg	< 5
Perfluorooctanesulfonic acid (PFOS)[N11]	5	ug/kg	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5
13C3-PFBS (surr.)	1	%	82
18O2-PFHxS (surr.)	1	%	89
13C8-PFOS (surr.)	1	%	89
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	10	ug/kg	< 10
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	5	ug/kg	< 5
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	5	ug/kg	< 5
13C2-4:2 FTS (surr.)	1	%	70
13C2-6:2 FTSA (surr.)	1	%	77

Client Sample ID			BH220_0.4
Sample Matrix			**Soil**
Eurofins Sample No.			**S21-Jl01464**
Date Sampled			**Jul 01, 2021**
Test/Reference	LOR	Unit	
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
13C2-8:2 FTSA (surr.)	1	%	73
13C2-10:2 FTSA (surr.)	1	%	111
PFASs Summations			
Sum (PFHxS + PFOS)*	5	ug/kg	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jul 02, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jul 02, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 02, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 02, 2021	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 02, 2021	28 Days
- Method: In-house method E057.2			
% Moisture	Sydney	Jul 01, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Sydney	Jul 02, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Sydney	Jul 02, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Sydney	Jul 02, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Sydney	Jul 02, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Sydney	Jul 01, 2021	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: ERM Hunter Valley
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Project Name: UNICORN

Order No.:
Report #: 807316
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 1, 2021 2:20 PM
Due: Jul 6, 2021
Priority: 3 Day
Contact Name: - ALL INVOICES

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	HOLD	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	TRIP SPIKE	Jul 01, 2021		Soil	S21-Jl01431									X
2	LAB TRIP SPIKE	Jul 01, 2021		Soil	S21-Jl01432									X
3	TRIP BLANK	Jul 01, 2021		Soil	S21-Jl01433						X			
4	GW230_0.6	Jun 28, 2021		Soil	S21-Jl01434	X	X		X	X		X	X	
5	GW230_3.9	Jun 28, 2021		Soil	S21-Jl01435	X	X		X	X		X	X	
6	GW216_1.0	Jun 28, 2021		Soil	S21-Jl01436	X	X		X	X		X	X	
7	GW216_3.0	Jun 28, 2021		Soil	S21-Jl01437	X	X		X	X		X	X	
8	GW207_0.6	Jun 28, 2021		Soil	S21-Jl01438	X	X		X	X		X	X	
9	DUP04_21062	Jun 28, 2021		Soil	S21-Jl01439	X	X		X	X		X	X	

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Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
	8													
10	TP202_0.3	Jun 28, 2021		Soil	S21-Jl01440	X	X		X	X			X	
11	TP202_0.8	Jun 28, 2021		Soil	S21-Jl01441	X	X		X	X		X	X	
12	TP202_1.2	Jun 28, 2021		Soil	S21-Jl01442	X	X		X	X		X	X	
13	TP202_1.8	Jun 28, 2021		Soil	S21-Jl01443	X	X		X	X		X	X	
14	GW207_3.0	Jun 29, 2021		Soil	S21-Jl01444	X	X		X	X		X	X	
15	GW206_2.5	Jun 29, 2021		Soil	S21-Jl01445	X	X		X	X		X	X	
16	GW206_4.0	Jun 29, 2021		Soil	S21-Jl01446	X	X		X	X		X	X	
17	GW233_2.5	Jun 29, 2021		Soil	S21-Jl01447	X	X		X	X		X	X	
18	GW233_4.0	Jun 29, 2021		Soil	S21-Jl01448	X	X		X	X		X	X	
19	GW235_0.3	Jun 29, 2021		Soil	S21-Jl01449	X	X		X	X		X	X	

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Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
20	GW235_3.0	Jun 29, 2021		Soil	S21-Jl01450	X	X		X	X		X	X	
21	GW219_2.5	Jun 30, 2021		Soil	S21-Jl01451	X	X		X	X		X	X	
22	GW219_4.0	Jun 30, 2021		Soil	S21-Jl01452	X	X		X	X		X	X	
23	GW222_2.0	Jun 30, 2021		Soil	S21-Jl01453	X	X		X	X		X	X	
24	GW222_4.0	Jun 30, 2021		Soil	S21-Jl01454	X	X		X	X		X	X	
25	GW223_0.2	Jun 30, 2021		Soil	S21-Jl01455	X	X		X	X		X	X	
26	GW223_3.0	Jun 30, 2021		Soil	S21-Jl01456	X	X		X	X		X	X	
27	GW225_0.5	Jun 30, 2021		Soil	S21-Jl01457	X	X		X	X		X	X	
28	GW225_3.0	Jun 30, 2021		Soil	S21-Jl01458	X	X		X	X		X	X	
29	DUP05_210630	Jun 30, 2021		Soil	S21-Jl01459	X	X		X	X		X	X	
30	TP218_0.4	Jun 30, 2021		Soil	S21-Jl01460	X	X		X	X		X	X	

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Melbourne Laboratory - NATA Site # 1254														
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
Mayfield Laboratory - NATA Site # 25079														
External Laboratory														
31	TP218_1.2	Jun 30, 2021		Soil	S21-Jl01461	X	X		X	X		X	X	
32	GW228_3.0	Jul 01, 2021		Soil	S21-Jl01462	X	X		X	X		X	X	
33	GW228_4.0	Jul 01, 2021		Soil	S21-Jl01463	X	X		X	X		X	X	
34	BH220_0.4	Jul 01, 2021		Soil	S21-Jl01464	X	X		X	X		X	X	
35	GW207 ACM	Jul 01, 2021		Building Materials	S21-Jl01559			X						
Test Counts						31	31	1	31	31	1	30	31	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							
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	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
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	
Benzene	mg/kg	< 0.1			0.1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Isopropyl benzene (Cumene)	mg/kg	< 0.5			0.5	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Styrene	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
Toluene	mg/kg	< 0.1			0.1	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	
Xylenes - Total*	mg/kg	< 0.3			0.3	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							
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)							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 0			20	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 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							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	72			70-130	Pass	
TRH C10-C14	%	126			70-130	Pass	
Naphthalene	%	91			70-130	Pass	
Naphthalene	%	103			70-130	Pass	
TRH C6-C10	%	72			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	120			70-130	Pass	
Toluene	%	121			70-130	Pass	
Ethylbenzene	%	97			70-130	Pass	
m&p-Xylenes	%	111			70-130	Pass	
o-Xylene	%	111			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	97			70-130	Pass	
1.1.1-Trichloroethane	%	124			70-130	Pass	
1.2-Dichlorobenzene	%	96			70-130	Pass	
1.2-Dichloroethane	%	128			70-130	Pass	
Benzene	%	121			70-130	Pass	
Ethylbenzene	%	103			70-130	Pass	
m&p-Xylenes	%	107			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Toluene	%	106			70-130	Pass	
Trichloroethene	%	105			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	102			70-130	Pass	
Anthracene	%	73			70-130	Pass	
Benzo(a)pyrene	%	74			70-130	Pass	
Benzo(b&j)fluoranthene	%	78			70-130	Pass	
Benzo(k)fluoranthene	%	83			70-130	Pass	
Chrysene	%	70			70-130	Pass	
Fluorene	%	72			70-130	Pass	
Naphthalene	%	71			70-130	Pass	
Pyrene	%	107			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	96			30-130	Pass	
4-Chloro-3-methylphenol	%	80			30-130	Pass	
Pentachlorophenol	%	83			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
4-Nitrophenol	%	81			30-130	Pass	
Phenol	%	91			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	103			70-130	Pass	
1.4-Dichlorobenzene	%	92			70-130	Pass	
2-Chlorophenol	%	96			30-130	Pass	
2.4-Dinitrotoluene	%	70			70-130	Pass	
4-Chloro-3-methylphenol	%	79			30-130	Pass	
Acenaphthene	%	70			70-130	Pass	
N-Nitrosodipropylamine	%	101			70-130	Pass	
Pentachlorophenol	%	86			30-130	Pass	
Phenol	%	89			30-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	100			80-120	Pass	
Cadmium	%	87			80-120	Pass	
Chromium	%	80			80-120	Pass	
Copper	%	105			80-120	Pass	
Lead	%	104			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	103			80-120	Pass	
Zinc	%	100			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	102			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	96			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	104			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	103			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	116			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	99			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	103			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorododecanoic acid (PFDoDA)	%	119			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	120			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	116			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	118			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	97			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	92			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	94			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	106			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	113			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	97			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	99			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	108			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	96			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	100			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	102			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	96			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	103			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	110			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	95			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)	%	67			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
Naphthalene	S21-Jl01434	CP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl01434	CP	%	84			70-130	Pass	
Toluene	S21-Jl01434	CP	%	87			70-130	Pass	
Ethylbenzene	S21-Jl01434	CP	%	95			70-130	Pass	
m&p-Xylenes	S21-Jl01434	CP	%	97			70-130	Pass	
o-Xylene	S21-Jl01434	CP	%	107			70-130	Pass	
Xylenes - Total*	S21-Jl01434	CP	%	100			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S21-Jn57285	NCP	%	79			70-130	Pass	
Acenaphthylene	S21-Jn57285	NCP	%	87			70-130	Pass	
Anthracene	S21-Jn57285	NCP	%	80			70-130	Pass	
Benz(a)anthracene	S21-Jn57285	NCP	%	82			70-130	Pass	
Benzo(a)pyrene	S21-Jn57285	NCP	%	85			70-130	Pass	
Benzo(b&j)fluoranthene	S21-Jn57285	NCP	%	76			70-130	Pass	
Benzo(g.h.i)perylene	S21-Jn57285	NCP	%	80			70-130	Pass	
Benzo(k)fluoranthene	S21-Jn57285	NCP	%	84			70-130	Pass	
Chrysene	S21-Jn57285	NCP	%	78			70-130	Pass	
Dibenz(a.h)anthracene	S21-Jn57285	NCP	%	87			70-130	Pass	
Fluoranthene	S21-Jn57285	NCP	%	81			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluorene	S21-Jn57285	NCP	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jn57285	NCP	%	92			70-130	Pass	
Naphthalene	S21-Jn57285	NCP	%	77			70-130	Pass	
Phenanthrene	S21-Jn57285	NCP	%	78			70-130	Pass	
Pyrene	S21-Jn57285	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	S21-Jn61333	NCP	%	90			30-130	Pass	
2.4-Dichlorophenol	S21-Jn61333	NCP	%	86			30-130	Pass	
2.4.6-Trichlorophenol	S21-Jn61333	NCP	%	101			30-130	Pass	
2.6-Dichlorophenol	S21-Jn61333	NCP	%	98			30-130	Pass	
4-Chloro-3-methylphenol	S21-Jn54180	NCP	%	83			30-130	Pass	
Pentachlorophenol	S21-Jn61333	NCP	%	98			30-130	Pass	
Tetrachlorophenols - Total	S21-Jn61333	NCP	%	71			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Methyl-4.6-dinitrophenol	S21-Jn61333	NCP	%	114			30-130	Pass	
2.4-Dimethylphenol	S21-Jn61333	NCP	%	95			30-130	Pass	
2-Methylphenol (o-Cresol)	S21-Jn61333	NCP	%	99			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jn61333	NCP	%	98			30-130	Pass	
4-Nitrophenol	S21-Jn61333	NCP	%	88			30-130	Pass	
Phenol	S21-Jn61333	NCP	%	85			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Zinc	N21-Jn57963	NCP	%	106			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl02051	NCP	%	80			70-130	Pass	
TRH C10-C14	S21-Jl01435	CP	%	82			70-130	Pass	
TRH C6-C10	S21-Jl02051	NCP	%	79			70-130	Pass	
TRH >C10-C16	S21-Jl01435	CP	%	83			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jn59917	NCP	%	104			70-130	Pass	
1.1.1-Trichloroethane	S21-Jn59917	NCP	%	87			70-130	Pass	
1.2-Dichloroethane	S21-Jn59917	NCP	%	105			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl01436	CP	%	98			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl01436	CP	%	89			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl01436	CP	%	88			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl01436	CP	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl01436	CP	%	100			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl01436	CP	%	98			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl01436	CP	%	105			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl01436	CP	%	98			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl01436	CP	%	101			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl01436	CP	%	117			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl01436	CP	%	97			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctane sulfonamide (FOSA)	S21-Jl01436	CP	%	93			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl01436	CP	%	117			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl01436	CP	%	103			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl01436	CP	%	96			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl01436	CP	%	98			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl01436	CP	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl01436	CP	%	108			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl01436	CP	%	91			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl01436	CP	%	96			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl01436	CP	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl01436	CP	%	95			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl01436	CP	%	95			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl01436	CP	%	90			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl01436	CP	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl01436	CP	%	97			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S21-Jl01436	CP	%	95			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl01436	CP	%	101			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl01436	CP	%	93			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl01436	CP	%	88			50-150	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Jl01455	CP	%	115			70-130	Pass	
TRH >C10-C16	S21-Jl01455	CP	%	105			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jl01455	CP	%	115			75-125	Pass	
Cadmium	S21-Jl01455	CP	%	97			75-125	Pass	
Chromium	S21-Jl01455	CP	%	95			75-125	Pass	
Copper	S21-Jl01455	CP	%	109			75-125	Pass	
Lead	S21-Jl01455	CP	%	125			75-125	Pass	
Mercury	S21-Jl01455	CP	%	81			75-125	Pass	
Nickel	S21-Jl01455	CP	%	122			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C10-C14	S21-Jl01460	CP	%	94			70-130	Pass	
TRH >C10-C16	S21-Jl01460	CP	%	96			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl01434	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl01434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jl01434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S21-Jl01434	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jl01434	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jl01434	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl01434	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl01434	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl01434	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl01434	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl01434	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl01434	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jl01434	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jl01434	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl01434	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
g-BHC (Lindane)	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl01434	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jl01434	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl01434	CP	%	11	12	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl01434	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S21-Jl01434	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl01434	CP	mg/kg	23	20	18	30%	Pass	
Copper	S21-Jl01434	CP	mg/kg	17	16	5.0	30%	Pass	
Lead	S21-Jl01434	CP	mg/kg	73	67	10	30%	Pass	
Mercury	S21-Jl01434	CP	mg/kg	0.2	0.2	11	30%	Pass	
Nickel	S21-Jl01434	CP	mg/kg	9.0	9.5	6.0	30%	Pass	
Zinc	S21-Jl01434	CP	mg/kg	47	46	4.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl01434	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl01434	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl01434	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)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl01434	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl01434	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl01443	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jl01443	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl01443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jl01443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jl01443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jl01443	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jl01443	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jl01443	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.2-Dibromoethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jl01443	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl01444	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl01444	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jl01444	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S21-Jl01444	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jl01444	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jl01444	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl01444	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl01444	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl01444	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl01444	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl01444	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl01444	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jl01444	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jl01444	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Nitroaniline	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl01444	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl01444	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Pronamide	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jl01444	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl01444	CP	%	20	20	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl01444	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S21-Jl01444	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl01444	CP	mg/kg	22	22	3.0	30%	Pass	
Copper	S21-Jl01444	CP	mg/kg	24	19	27	30%	Pass	
Lead	S21-Jl01444	CP	mg/kg	75	66	13	30%	Pass	
Mercury	S21-Jl01444	CP	mg/kg	0.4	0.3	19	30%	Pass	
Nickel	S21-Jl01444	CP	mg/kg	8.7	10	18	30%	Pass	
Zinc	S21-Jl01444	CP	mg/kg	47	39	18	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl01453	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jl01453	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl01453	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jl01453	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jl01453	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jl01453	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jl01453	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jl01453	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromoform	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jl01453	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl01454	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl01454	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jl01454	CP	mg/kg	< 50	52	31	30%	Fail	Q15
TRH >C10-C16	S21-Jl01454	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jl01454	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jl01454	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl01454	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl01454	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl01454	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl01454	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl01454	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl01454	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jl01454	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jl01454	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
b-BHC	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl01454	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl01454	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jl01454	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl01454	CP	%	23	24	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl01454	CP	mg/kg	21	23	11	30%	Pass	
Cadmium	S21-Jl01454	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl01454	CP	mg/kg	5.9	6.0	2.0	30%	Pass	
Copper	S21-Jl01454	CP	mg/kg	52	27	64	30%	Fail	Q15
Lead	S21-Jl01454	CP	mg/kg	20	21	7.0	30%	Pass	
Mercury	S21-Jl01454	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jl01454	CP	mg/kg	6.7	< 5	39	30%	Fail	Q15
Zinc	S21-Jl01454	CP	mg/kg	32	37	15	30%	Pass	

Duplicate								
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD		
Perfluorobutanoic acid (PFBA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanoic acid (PFPeA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanoic acid (PFHxA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanoic acid (PFHpA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanoic acid (PFOA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanoic acid (PFNA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanoic acid (PFDA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroundecanoic acid (PFUnDA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorododecanoic acid (PFDoDA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotridecanoic acid (PFTrDA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD		
Perfluorooctane sulfonamide (FOSA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl01454	CP	ug/kg	< 10	< 10	<1	30%	Pass
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl01454	CP	ug/kg	< 10	< 10	<1	30%	Pass
Duplicate								
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD		
Perfluorobutanesulfonic acid (PFBS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorononanesulfonic acid (PFNS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorooctanesulfonic acid (PFOS)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
Perfluorodecanesulfonic acid (PFDS)	S21-Jl01454	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)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl01454	CP	ug/kg	< 10	< 10	<1	30%	Pass
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl01454	CP	ug/kg	< 5	< 5	<1	30%	Pass

Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl01460	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl01460	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jl01460	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C10-C16	S21-Jl01460	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jl01460	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jl01460	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl01460	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl01460	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl01460	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl01460	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl01460	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl01460	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	S21-Jl01460	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	S21-Jl01460	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1.2.4-Trichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Naphthylamine	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDD	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl01460	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl01460	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Hexachloroethane	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jl01460	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl01464	CP	%	12	12	1.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl01464	CP	mg/kg	3.6	4.5	22	30%	Pass	
Cadmium	S21-Jl01464	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl01464	CP	mg/kg	< 5	8.8	57	30%	Fail	Q15
Copper	S21-Jl01464	CP	mg/kg	< 5	10	88	30%	Fail	Q15
Lead	S21-Jl01464	CP	mg/kg	12	15	20	30%	Pass	
Mercury	S21-Jl01464	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jl01464	CP	mg/kg	6.2	7.7	21	30%	Pass	
Zinc	S21-Jl01464	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:

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Andrew Sullivan	Senior Analyst-PFAS (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

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Company	ERM	Project №		Project Manager	Ian Batterley
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name	UNICORN	EDD Format (ESdat, EQuIS, Custom)	Esdat/ EQUIS
Contact Name	Michael Mercer				
Phone №	439623103				
Special Directions					
Purchase Order					
Quote ID №	210615ERMN				

Sampler(s)	Michael Mercer
Handed over by	Michael Mercer
Email for Invoice	Ian.batterley@erm.com
Email for Results	Ian.batterley@erm.com and michael.mercer@erm.com and anthony.richard@erm.com

Analyses (Note: Where metals are requested, please specify "Total" or "Filtered") (1 SUITE preferred if specific metals required, 2 SUITES if general)

Containers

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 ( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	B7A	SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	+ ACM	1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass of HDPE)	Other (Asbestos AS4964: WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	GW216	5/07/21	W		X	X		X	X														
2	GW219	5/07/21	W		X	X		X	X														
3	GW222	5/07/21	W		X	X		X	X														
4	GW223	5/07/21	W		X	X		X	X														
5	GW225	5/07/21	W		X	X		X	X														
6	GW228	5/07/21	W		X	X		X	X														
7	20210705_D01	5/07/21	W		X	X		X	X														
8	20210705_T01	5/07/21	W		X	X		X	X														FORWARD TO ALS (DUP)
9	20210705_D02	5/07/21	W		X																		
10	20210705_T02	5/07/21	W		X																		FORWARD TO ALS (DUP)
11	TS		S										X										
12	TB		S									X											
13	BH208_0.3	5/07/21	S		X		X	X	X	X													
14	BH208_1.2	5/07/21	S		X		X	X	X	X													
15	BH209_0.1	5/07/21	S	X																			
16	BH209_0.2	5/07/21	S		X		X	X	X	X													
17	BH209_0.7	5/07/21	S	X																			
18	BH209_1.4	5/07/21	S		X		X	X	X	X													
19	BH231_0.1	5/07/21	S		X		X	X	X	X													
20	BH234_0.1	5/07/21	S		X		X	X	X	X													
21	BH234_0.4	5/07/21	S		X		X	X	X	X													
22	HS240_0.05	5/07/21	S		X																		
23	HS241_0.05	5/07/21	S		X																		
24	DUP08_210702	5/07/21	S		X		X	X	X	X													
25	TRIP08_210702	5/07/21	S		X		X	X	X	X													FORWARD TO ALS (DUP)
26	HS242_0.05	5/07/21	S		X																		
27	HS243_0.05	5/07/21	S		X																		
28	HS244_0.02	5/07/21	S		X																		
29	SW245	5/07/21	S		X																		
30	SW246	5/07/21	S		X																		
31	SED246	5/07/21	S		X		X	X	X	X													
32	SW_Frag	5/07/21	S											X									FORWARD TO ALS (DUP)
33	SED247	5/07/21	S		X		X	X	X	X													
34	SED248	5/07/21	S		X		X	X	X	X													FORWARD TO ALS (DUP)
35	SED249	5/07/21	S		X		X	X	X	X													
36	SED250	5/07/21	S		X		X	X	X	X													FORWARD TO ALS (DUP)
37	SW250	5/07/21	S		X																		
38	SED250	5/07/21	S		X		X	X	X	X													
	Total Counts		2	#	#		#	#	#		#	#	#										

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal

Name	michael mercer	Signature		Date	25/06/21
Time					

Eurofins | mgt Laboratory Use Only

Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	5/7
Time		Temperature	6-6.3		
Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	
Time		Report №	808627		

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

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

eurofins | Environment Testing

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Sample Receipt Advice

Company name:	ERM Hunter Valley
Contact name:	Ian Batterley
Project name:	UNICORN
Project ID:	Not provided
Turnaround time:	1 Day
Date/Time received	Jul 5, 2021 4:42 PM
Eurofins reference	808027

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.6 degrees Celsius.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✓	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

SED250 written twice on COC and SED251 received extra, SED251 kept at Eurofins and SED250 (jar, bag and tub) forwarded to ALS. SW251 received instead of SW250, logged as per ID on sample. GW201_1.5, GW201_3.0, SS204_0.1, SS205_0.1, BH215_0.4, BH217_0.4 and DUP06_210701 (jar, bag and tub) received extra and placed on hold. TRIP06_210701 (jar, bag and tub) also received extra and forwarded to ALS. 20210705_T01 (PFAS, chromium, metals, amber and two vials), 20210705_T02 (PFAS) and TRIP08_210702 (jar, bag and tub) forwarded to ALS.

Contact

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

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@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 Hunter Valley email address.

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

Project Name: UNICORN

Order No.:
Report #: 808027
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794					X	X					X	
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	GW216	Jul 05, 2021		Water	S21-Jl07104			X				X			X	X	
2	GW219	Jul 05, 2021		Water	S21-Jl07105			X				X			X	X	
3	GW222	Jul 05, 2021		Water	S21-Jl07106			X				X			X	X	
4	GW223	Jul 05, 2021		Water	S21-Jl07107			X				X			X	X	
5	GW225	Jul 05, 2021		Water	S21-Jl07108			X				X			X	X	
6	GW228	Jul 05, 2021		Water	S21-Jl07109			X				X			X	X	
7	20210705_D01	Jul 05, 2021		Water	S21-Jl07110			X				X			X	X	
8	20210705_D02	Jul 05, 2021		Water	S21-Jl07111											X	

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NSW 2300

Project Name: UNICORN

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Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
9	TS	Jul 05, 2021		Soil	S21-Jl07112												X
10	TB	Jul 05, 2021		Soil	S21-Jl07114									X			
11	BH208_0.3	Jul 05, 2021		Soil	S21-Jl07115	X		X			X		X		X	X	
12	BH208_1.2	Jul 05, 2021		Soil	S21-Jl07116	X		X			X		X		X	X	
13	BH209_0.2	Jul 05, 2021		Soil	S21-Jl07117	X		X			X		X		X	X	
14	BH209_1.4	Jul 05, 2021		Soil	S21-Jl07118	X		X			X		X		X	X	
15	BH231_0.1	Jul 05, 2021		Soil	S21-Jl07119	X		X			X		X		X	X	
16	BH234_0.1	Jul 05, 2021		Soil	S21-Jl07120	X		X			X		X		X	X	
17	BH234_0.4	Jul 05, 2021		Soil	S21-Jl07121	X		X			X		X		X	X	
18	DUP08_210702	Jul 05, 2021		Soil	S21-Jl07122	X		X			X		X		X	X	
19	SED246	Jul 05, 2021		Soil	S21-Jl07123	X		X			X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
20	SW_FRAG	Jul 05, 2021		Building Materials	S21-Jl07124		X										
21	SED247	Jul 05, 2021		Soil	S21-Jl07125	X		X			X		X		X	X	
22	SED248	Jul 05, 2021		Soil	S21-Jl07126	X		X			X		X		X	X	
23	SED249	Jul 05, 2021		Soil	S21-Jl07127	X		X			X		X		X	X	
24	SED251	Jul 05, 2021		Soil	S21-Jl07128	X		X			X		X		X	X	
25	HS240_0.05	Jul 05, 2021		Rock	S21-Jl07129					X						X	
26	HS241_0.05	Jul 05, 2021		Rock	S21-Jl07130					X						X	
27	HS242_0.05	Jul 05, 2021		Rock	S21-Jl07131					X						X	
28	HS243_0.05	Jul 05, 2021		Rock	S21-Jl07132					X						X	
29	HS244_0.02	Jul 05, 2021		Rock	S21-Jl07133					X						X	
30	SW245	Jul 05, 2021		Water	S21-Jl07134											X	

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Priority: 1 Day
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Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
31	SW246	Jul 05, 2021		Water	S21-Jl07135											X	
32	SW251	Jul 05, 2021		Water	S21-Jl07136											X	
33	BH209_0.1	Jul 05, 2021		Soil	S21-Jl07137				X								
34	BH209_0.7	Jul 05, 2021		Soil	S21-Jl07138				X								
35	GW201_1.5	Jul 05, 2021		Soil	S21-Jl07326				X								
36	GW201_3.0	Jul 05, 2021		Soil	S21-Jl07327				X								
37	SS204_0.1	Jul 05, 2021		Soil	S21-Jl07328				X								
38	SS205_0.1	Jul 05, 2021		Soil	S21-Jl07329				X								
39	BH215_0.4	Jul 05, 2021		Soil	S21-Jl07330				X								
40	BH217_0.4	Jul 05, 2021		Soil	S21-Jl07331				X								
41	DUP06_210701	Jul 05, 2021		Soil	S21-Jl07332				X								

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Project Name: UNICORN

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Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794					X	X					X	
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
Test Counts	13	1	20	9	18	18	7	13	1	20	29	1

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

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

Attention:	Ian Batterley
Report	808027-AID
Project Name	UNICORN
Received Date	Jul 05, 2021
Date Reported	Jul 06, 2021

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.*

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Project Name UNICORN
Project ID
Date Sampled Jul 05, 2021
Report 808027-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH208_0.3	21-JI07115	Jul 05, 2021	Approximate Sample 550g Sample consisted of: Brown coarse-grained sandy soil, ash, bitumen and rocks	Chrysotile asbestos detected in fibre cement fragments. Chrysotile and amosite asbestos detected in weathered fibre plaster material Approximate raw weight of asbestos containing material = 0.22g* Total estimated asbestos content in the sample = 0.045g* Total estimated asbestos concentration = 0.0082% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH208_1.2	21-JI07116	Jul 05, 2021	Approximate Sample 664g Sample consisted of: Brown- black coarse-grained sandy soil, ash, bitumen, glass fragmets and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH209_0.2	21-JI07117	Jul 05, 2021	Approximate Sample 523g Sample consisted of: Brown- black coarse-grained sandy soil, ash, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH209_1.4	21-JI07118	Jul 05, 2021	Approximate Sample 733g 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.
BH231_0.1	21-JI07119	Jul 05, 2021	Approximate Sample 457g 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.
BH234_0.1	21-JI07120	Jul 05, 2021	Approximate Sample 528g Sample consisted of: Brown coarse-grained sandy soil, organic debris, bitumen, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Accreditation Number 1261
Site Number 18217

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH234_0.4	21-Jl07121	Jul 05, 2021	Approximate Sample 640g Sample consisted of: Brown coarse-grained sandy soil, cement, bitumen, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
DUP08_210702	21-Jl07122	Jul 05, 2021	Approximate Sample 601g 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.
SED246	21-Jl07123	Jul 05, 2021	Approximate Sample 404g Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SW_FRAG	21-Jl07124	Jul 05, 2021	Approximate Sample 10g / 60x30x4mm Sample consisted of: Off- white layered fibre cement material	Chrysotile and amosite asbestos detected.
SED247	21-Jl07125	Jul 05, 2021	Approximate Sample 429g Sample consisted of: Brown coarse-grained sandy soil, cement, organic debris, wood chips and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SED248	21-Jl07126	Jul 05, 2021	Approximate Sample 249g Sample consisted of: Black coarse-grained sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SED249	21-Jl07127	Jul 05, 2021	Approximate Sample 543 Sample consisted of: Brown coarse-grained sandy soil, organic debris and rocks	Amosite asbestos detected in the form of loose fibre bundles. Approximate raw weight of asbestos containing material = 0.00010g* Total estimated asbestos content in the sample = 0.00010g* Total estimated asbestos concentration = 0.000018% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SED251	21-Jl07128	Jul 05, 2021	Approximate Sample 357g Sample consisted of: Brown coarse-grained sandy soil, organic debris 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 is reported.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 05, 2021	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Jul 05, 2021	Indefinite

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

Project Name: UNICORN

Order No.:
Report #: 808027
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	GW216	Jul 05, 2021		Water	S21-Jl07104			X				X			X	X	
2	GW219	Jul 05, 2021		Water	S21-Jl07105			X				X			X	X	
3	GW222	Jul 05, 2021		Water	S21-Jl07106			X				X			X	X	
4	GW223	Jul 05, 2021		Water	S21-Jl07107			X				X			X	X	
5	GW225	Jul 05, 2021		Water	S21-Jl07108			X				X			X	X	
6	GW228	Jul 05, 2021		Water	S21-Jl07109			X				X			X	X	
7	20210705_D01	Jul 05, 2021		Water	S21-Jl07110			X				X			X	X	
8	20210705_D02	Jul 05, 2021		Water	S21-Jl07111											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
9	TS	Jul 05, 2021		Soil	S21-Jl07112												X
10	TB	Jul 05, 2021		Soil	S21-Jl07114									X			
11	BH208_0.3	Jul 05, 2021		Soil	S21-Jl07115	X		X			X		X		X	X	
12	BH208_1.2	Jul 05, 2021		Soil	S21-Jl07116	X		X			X		X		X	X	
13	BH209_0.2	Jul 05, 2021		Soil	S21-Jl07117	X		X			X		X		X	X	
14	BH209_1.4	Jul 05, 2021		Soil	S21-Jl07118	X		X			X		X		X	X	
15	BH231_0.1	Jul 05, 2021		Soil	S21-Jl07119	X		X			X		X		X	X	
16	BH234_0.1	Jul 05, 2021		Soil	S21-Jl07120	X		X			X		X		X	X	
17	BH234_0.4	Jul 05, 2021		Soil	S21-Jl07121	X		X			X		X		X	X	
18	DUP08_210702	Jul 05, 2021		Soil	S21-Jl07122	X		X			X		X		X	X	
19	SED246	Jul 05, 2021		Soil	S21-Jl07123	X		X			X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
20	SW_FRAG	Jul 05, 2021		Building Materials	S21-Jl07124		X										
21	SED247	Jul 05, 2021		Soil	S21-Jl07125	X		X			X		X		X	X	
22	SED248	Jul 05, 2021		Soil	S21-Jl07126	X		X			X		X		X	X	
23	SED249	Jul 05, 2021		Soil	S21-Jl07127	X		X			X		X		X	X	
24	SED251	Jul 05, 2021		Soil	S21-Jl07128	X		X			X		X		X	X	
25	HS240_0.05	Jul 05, 2021		Rock	S21-Jl07129					X						X	
26	HS241_0.05	Jul 05, 2021		Rock	S21-Jl07130					X						X	
27	HS242_0.05	Jul 05, 2021		Rock	S21-Jl07131					X						X	
28	HS243_0.05	Jul 05, 2021		Rock	S21-Jl07132					X						X	
29	HS244_0.02	Jul 05, 2021		Rock	S21-Jl07133					X						X	
30	SW245	Jul 05, 2021		Water	S21-Jl07134											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
31	SW246	Jul 05, 2021		Water	S21-Jl07135											X	
32	SW251	Jul 05, 2021		Water	S21-Jl07136											X	
33	BH209_0.1	Jul 05, 2021		Soil	S21-Jl07137				X								
34	BH209_0.7	Jul 05, 2021		Soil	S21-Jl07138				X								
35	GW201_1.5	Jul 05, 2021		Soil	S21-Jl07326				X								
36	GW201_3.0	Jul 05, 2021		Soil	S21-Jl07327				X								
37	SS204_0.1	Jul 05, 2021		Soil	S21-Jl07328				X								
38	SS205_0.1	Jul 05, 2021		Soil	S21-Jl07329				X								
39	BH215_0.4	Jul 05, 2021		Soil	S21-Jl07330				X								
40	BH217_0.4	Jul 05, 2021		Soil	S21-Jl07331				X								
41	DUP06_210701	Jul 05, 2021		Soil	S21-Jl07332				X								

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Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794					X	X					X	
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
Test Counts	13	1	20	9	18	18	7	13	1	20	29	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.

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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Attention: **Ian Batterley**

Report **808027-S**
Project name UNICORN
Received Date Jul 05, 2021

Client Sample ID			**TS**	**TB**	**BH208_0.3**	**BH208_1.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Jl07112**	**S21-Jl07114**	**S21-Jl07115**	**S21-Jl07116**
Date Sampled			**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
Naphthalene	1	%	89	-	-	-
BTEX						
Benzene	1	%	97	-	-	-
Ethylbenzene	1	%	91	-	-	-
m&p-Xylenes	1	%	92	-	-	-
o-Xylene	1	%	92	-	-	-
Toluene	1	%	94	-	-	-
Xylenes - Total	1	%	92	-	-	-
4-Bromofluorobenzene (surr.)	1	%	93	-	-	-
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	130	170
TRH C29-C36	50	mg/kg	-	-	110	140
TRH C10-C36 (Total)	50	mg/kg	-	-	240	310
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	-	-	210	280
TRH >C34-C40	100	mg/kg	-	-	< 100	100
TRH >C10-C40 (total)*	100	mg/kg	-	-	210	380
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	%	-	104	82	82
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

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	-	-	82	82
Toluene-d8 (surr.)	1	%	-	-	101	102
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 2	1.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	< 2	2.1
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	3.6	2.7
Acenaphthene	0.5	mg/kg	-	-	< 1	< 1
Acenaphthylene	0.5	mg/kg	-	-	< 1	< 1
Anthracene	0.5	mg/kg	-	-	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	-	-	< 2	1.4
Benzo(a)pyrene	0.5	mg/kg	-	-	< 2	1.2
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	-	-	1.3	1.5
Chrysene	0.5	mg/kg	-	-	1.7	1.9
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 1	< 1
Fluoranthene	0.5	mg/kg	-	-	< 2	2.8
Fluorene	0.5	mg/kg	-	-	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 1	< 1
Naphthalene	0.5	mg/kg	-	-	< 1	< 1
Phenanthrene	0.5	mg/kg	-	-	< 2	1.9
Pyrene	0.5	mg/kg	-	-	< 5	3.5
Total PAH*	0.5	mg/kg	-	-	< 5	14.2
2-Fluorobiphenyl (surr.)	1	%	-	-	100	93
p-Terphenyl-d14 (surr.)	1	%	-	-	89	80
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 2	< 2
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 2	< 2
Pentachlorophenol	1	mg/kg	-	-	< 2	< 2
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 2	< 2
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 50	< 50
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 10	< 10
2-Nitrophenol	1	mg/kg	-	-	< 2	< 2
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	-	-	< 10	< 10
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 2	< 2
Total cresols*	0.5	mg/kg	-	-	< 2	< 2
4-Nitrophenol	5	mg/kg	-	-	< 10	< 10
Dinoseb	20	mg/kg	-	-	< 50	< 50

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
Phenol	0.5	mg/kg	-	-	< 1	< 1
Phenol-d6 (surr.)	1	%	-	-	94	82
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 50	< 50
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 2	1.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	< 2	2.1
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	3.6	2.7
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 10	< 10
1-Chloronaphthalene	0.5	mg/kg	-	-	< 1	< 1
1-Naphthylamine	0.5	mg/kg	-	-	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.2.3-Trichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.2.4-Trichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.3.5-Trichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	-	-	< 1	< 1
2-Chloronaphthalene	0.5	mg/kg	-	-	< 1	< 1
2-Chlorophenol	0.5	mg/kg	-	-	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	-	-	100	93
2-Methylnaphthalene	0.5	mg/kg	-	-	< 1	< 1
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 1	< 1
2-Naphthylamine	0.5	mg/kg	-	-	< 1	< 1
2-Nitroaniline	1	mg/kg	-	-	< 1	< 1
2-Nitrophenol	1	mg/kg	-	-	< 2	< 2
2-Picoline	0.5	mg/kg	-	-	< 1	< 1
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	-	-	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	-	-	< 10	< 10
2.4-Dinitrotoluene	0.5	mg/kg	-	-	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 2	< 2
2.4.6-Tribromophenol (surr.)	1	%	-	-	INT	INT
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 1	< 1
2.6-Dinitrotoluene	1	mg/kg	-	-	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 2	< 2
3-Methylcholanthrene	0.5	mg/kg	-	-	< 1	< 1
3.3'-Dichlorobenzidine	0.5	mg/kg	-	-	< 1	< 1
4-Aminobiphenyl	0.5	mg/kg	-	-	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	-	-	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 2	< 2
4-Chlorophenyl phenyl ether	0.5	mg/kg	-	-	< 1	< 1
4-Nitrophenol	5	mg/kg	-	-	< 10	< 10
4.4'-DDD	0.5	mg/kg	-	-	< 1	< 1
4.4'-DDE	0.5	mg/kg	-	-	< 1	< 1
4.4'-DDT	1	mg/kg	-	-	< 1	< 1

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	-	-	< 1	< 1
a-BHC	0.5	mg/kg	-	-	< 1	< 1
Acenaphthene	0.5	mg/kg	-	-	< 1	< 1
Acenaphthylene	0.5	mg/kg	-	-	< 1	< 1
Acetophenone	0.5	mg/kg	-	-	< 1	< 1
Aldrin	0.5	mg/kg	-	-	< 1	< 1
Aniline	0.5	mg/kg	-	-	< 1	< 1
Anthracene	0.5	mg/kg	-	-	< 1	< 1
b-BHC	0.5	mg/kg	-	-	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	-	-	< 2	1.4
Benzo(a)pyrene	0.5	mg/kg	-	-	< 2	1.2
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	-	-	1.3	1.5
Benzyl chloride	0.5	mg/kg	-	-	< 1	< 1
Bis(2-chloroethoxy)methane	0.5	mg/kg	-	-	< 1	< 1
Bis(2-chloroisopropyl)ether	0.5	mg/kg	-	-	< 1	< 1
Bis(2-ethylhexyl)phthalate	5	mg/kg	-	-	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	-	-	< 1	< 1
Chrysene	0.5	mg/kg	-	-	1.7	1.9
d-BHC	0.5	mg/kg	-	-	< 1	< 1
Di-n-butyl phthalate	0.5	mg/kg	-	-	< 1	< 1
Di-n-octyl phthalate	0.5	mg/kg	-	-	< 1	< 1
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 1	< 1
Dibenz(a.j)acridine	0.5	mg/kg	-	-	< 1	< 1
Dibenzofuran	0.5	mg/kg	-	-	< 1	< 1
Dieldrin	0.5	mg/kg	-	-	< 1	< 1
Diethyl phthalate	0.5	mg/kg	-	-	< 1	< 1
Dimethyl phthalate	0.5	mg/kg	-	-	< 1	< 1
Dimethylaminoazobenzene	0.5	mg/kg	-	-	< 1	< 1
Diphenylamine	0.5	mg/kg	-	-	< 1	< 1
Endosulfan I	0.5	mg/kg	-	-	< 1	< 1
Endosulfan II	0.5	mg/kg	-	-	< 1	< 1
Endosulfan sulphate	0.5	mg/kg	-	-	< 1	< 1
Endrin	0.5	mg/kg	-	-	< 1	< 1
Endrin aldehyde	0.5	mg/kg	-	-	< 1	< 1
Endrin ketone	0.5	mg/kg	-	-	< 1	< 1
Fluoranthene	0.5	mg/kg	-	-	< 2	2.8
Fluorene	0.5	mg/kg	-	-	< 1	< 1
g-BHC (Lindane)	0.5	mg/kg	-	-	< 1	< 1
Heptachlor	0.5	mg/kg	-	-	< 1	< 1
Heptachlor epoxide	0.5	mg/kg	-	-	< 1	< 1
Hexachlorobenzene	0.5	mg/kg	-	-	< 1	< 1
Hexachlorobutadiene	0.5	mg/kg	-	-	< 1	< 1
Hexachlorocyclopentadiene	1	mg/kg	-	-	< 1	< 1
Hexachloroethane	0.5	mg/kg	-	-	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 1	< 1
Methoxychlor	0.5	mg/kg	-	-	< 1	< 1
N-Nitrosodibutylamine	0.5	mg/kg	-	-	< 1	< 1

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
N-Nitrosodipropylamine	0.5	mg/kg	-	-	< 1	< 1
N-Nitrosopiperidine	0.5	mg/kg	-	-	< 1	< 1
Naphthalene	0.5	mg/kg	-	-	< 1	< 1
Nitrobenzene	0.5	mg/kg	-	-	< 1	< 1
Nitrobenzene-d5 (surr.)	1	%	-	-	87	86
Pentachlorobenzene	0.5	mg/kg	-	-	< 1	< 1
Pentachloronitrobenzene	0.5	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 2	< 2
Phenanthrene	0.5	mg/kg	-	-	< 2	1.9
Phenol	0.5	mg/kg	-	-	< 1	< 1
Phenol-d6 (surr.)	1	%	-	-	94	82
Pronamide	0.5	mg/kg	-	-	< 1	< 1
Pyrene	0.5	mg/kg	-	-	< 5	3.5
Trifluralin	0.5	mg/kg	-	-	< 1	< 1
Chromium (hexavalent)	1	mg/kg	-	-	< 1	< 1
% Moisture	1	%	-	-	20	12
Heavy Metals						
Arsenic	2	mg/kg	-	-	6.5	4.2
Cadmium	0.4	mg/kg	-	-	0.8	< 0.4
Chromium	5	mg/kg	-	-	10	10
Copper	5	mg/kg	-	-	140	54
Lead	5	mg/kg	-	-	160	91
Mercury	0.1	mg/kg	-	-	0.3	0.2
Nickel	5	mg/kg	-	-	32	18
Zinc	5	mg/kg	-	-	250	190
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	%	-	-	117	107
13C5-PFPeA (surr.)	1	%	-	-	127	129
13C5-PFHxA (surr.)	1	%	-	-	125	129
13C4-PFHpA (surr.)	1	%	-	-	132	129
13C8-PFOA (surr.)	1	%	-	-	121	134
13C5-PFNA (surr.)	1	%	-	-	123	132
13C6-PFDA (surr.)	1	%	-	-	85	96
13C2-PFUnDA (surr.)	1	%	-	-	92	99
13C2-PFDoDA (surr.)	1	%	-	-	88	94
13C2-PFTeDA (surr.)	1	%	-	-	80	85

Client Sample ID			TS	TB	BH208_0.3	BH208_1.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07112	S21-Jl07114	S21-Jl07115	S21-Jl07116
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
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	%	-	-	105	107
D3-N-MeFOSA (surr.)	1	%	-	-	106	115
D5-N-EtFOSA (surr.)	1	%	-	-	104	102
D7-N-MeFOSE (surr.)	1	%	-	-	118	112
D9-N-EtFOSE (surr.)	1	%	-	-	114	116
D5-N-EtFOSAA (surr.)	1	%	-	-	82	82
D3-N-MeFOSAA (surr.)	1	%	-	-	72	82
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	%	-	-	121	132
18O2-PFHxS (surr.)	1	%	-	-	112	105
13C8-PFOS (surr.)	1	%	-	-	129	114
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 FTS (surr.)	1	%	-	-	27	38
13C2-6:2 FTSA (surr.)	1	%	-	-	37	54
13C2-8:2 FTSA (surr.)	1	%	-	-	42	36
13C2-10:2 FTSA (surr.)	1	%	-	-	85	91
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			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	94
TRH C29-C36	50	mg/kg	< 50	< 50	50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	50	94
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	190
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	290
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	%	74	89	85	78
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
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

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	74	89	85	78
Toluene-d8 (surr.)	1	%	104	121	111	99
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.2	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	2.4	2.4
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
2-Fluorobiphenyl (surr.)	1	%	96	100	105	94
p-Terphenyl-d14 (surr.)	1	%	100	107	92	79
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 2	< 2
Pentachlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 2	< 2
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 50	< 50
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
2-Nitrophenol	1	mg/kg	< 1	< 1	< 2	< 2
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 2	< 2
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
4-Nitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
Dinoseb	20	mg/kg	< 20	< 20	< 50	< 50
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Phenol-d6 (surr.)	1	%	93	107	94	79
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 50	< 50
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.2	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	2.4	2.4
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
1-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2.3-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2.4-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.3.5-Trichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2-Chloronaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	96	100	105	94
2-Methylnaphthalene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 1	< 1
2-Naphthylamine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 1	< 1	< 2	< 2
2-Picoline	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
2.4-Dinitrotoluene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
2.4.6-Tribromophenol (surr.)	1	%	58	62	INT	INT
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 2	< 2
3-Methylcholanthrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
3.3'-Dichlorobenzidine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4-Aminobiphenyl	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 2	< 2
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4-Nitrophenol	5	mg/kg	< 5	< 5	< 10	< 10
4.4'-DDD	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4.4'-DDE	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
a-BHC	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Acetophenone	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Aldrin	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Aniline	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
b-BHC	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Benzyl chloride	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
d-BHC	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Di-n-butyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Di-n-octyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dibenz(a.j)acridine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dibenzofuran	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dieldrin	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Diethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dimethyl phthalate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Dimethylaminoazobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Diphenylamine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endosulfan I	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endosulfan II	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endosulfan sulphate	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endrin	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endrin aldehyde	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Endrin ketone	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
g-BHC (Lindane)	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Heptachlor	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Heptachlor epoxide	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Hexachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Hexachlorobutadiene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Methoxychlor	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
N-Nitrosodibutylamine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
N-Nitrosodipropylamine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
N-Nitrosopiperidine	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Nitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Nitrobenzene-d5 (surr.)	1	%	95	101	94	77
Pentachlorobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Pentachloronitrobenzene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Pentachlorophenol	1	mg/kg	< 1	< 1	< 2	< 2
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Phenol-d6 (surr.)	1	%	93	107	94	79
Pronamide	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 2	< 2
Trifluralin	0.5	mg/kg	< 0.5	< 0.5	< 1	< 1
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	12	17	14	15
Heavy Metals						
Arsenic	2	mg/kg	2.1	3.2	2.3	7.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	0.4
Chromium	5	mg/kg	5.9	6.8	13	17
Copper	5	mg/kg	45	22	65	77
Lead	5	mg/kg	23	120	28	160

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Mercury	0.1	mg/kg	< 0.1	0.4	< 0.1	0.3
Nickel	5	mg/kg	24	< 5	19	19
Zinc	5	mg/kg	63	220	96	250
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	%	108	100	113	114
13C5-PFPeA (surr.)	1	%	117	114	123	136
13C5-PFHxA (surr.)	1	%	112	113	115	127
13C4-PFHpA (surr.)	1	%	109	119	125	134
13C8-PFOA (surr.)	1	%	110	98	109	133
13C5-PFNA (surr.)	1	%	121	112	115	138
13C6-PFDA (surr.)	1	%	73	78	86	96
13C2-PFUnDA (surr.)	1	%	88	80	79	86
13C2-PFDoDA (surr.)	1	%	82	76	81	85
13C2-PFTeDA (surr.)	1	%	80	67	76	69
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	%	92	81	100	89
D3-N-MeFOSA (surr.)	1	%	111	92	105	84
D5-N-EtFOSA (surr.)	1	%	93	94	88	77
D7-N-MeFOSE (surr.)	1	%	113	102	111	66
D9-N-EtFOSE (surr.)	1	%	113	98	120	68
D5-N-EtFOSAA (surr.)	1	%	75	71	77	65
D3-N-MeFOSAA (surr.)	1	%	81	73	82	80
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

Client Sample ID			BH209_0.2	BH209_1.4	BH231_0.1	BH234_0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07117	S21-Jl07118	S21-Jl07119	S21-Jl07120
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
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	%	110	100	111	123
18O2-PFHxS (surr.)	1	%	97	95	106	125
13C8-PFOS (surr.)	1	%	120	117	110	138
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 FTS (surr.)	1	%	26	28	38	52
13C2-6:2 FTSA (surr.)	1	%	18	39	50	59
13C2-8:2 FTSA (surr.)	1	%	27	18	46	57
13C2-10:2 FTSA (surr.)	1	%	84	67	90	79
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			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	170
TRH C15-C28	50	mg/kg	94	< 50	170	1800
TRH C29-C36	50	mg/kg	140	< 50	220	200
TRH C10-C36 (Total)	50	mg/kg	234	< 50	390	2170
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	200
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	200
TRH >C16-C34	100	mg/kg	190	< 100	330	2300
TRH >C34-C40	100	mg/kg	140	< 100	190	590
TRH >C10-C40 (total)*	100	mg/kg	330	< 100	520	3090

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
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	%	84	80	87	84
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
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

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	80	87	84
Toluene-d8 (surr.)	1	%	106	104	117	114
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.2	0.6	1.2	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.4	1.2	2.4	2.4
Acenaphthene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Acenaphthylene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(a)pyrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Chrysene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Fluoranthene	0.5	mg/kg	< 2	< 0.5	< 2	< 2
Fluorene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Naphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Phenanthrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Pyrene	0.5	mg/kg	< 2	< 0.5	< 2	< 2
Total PAH*	0.5	mg/kg	< 2	< 0.5	< 2	< 2
2-Fluorobiphenyl (surr.)	1	%	107	100	100	105
p-Terphenyl-d14 (surr.)	1	%	89	108	93	105
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
2.4.6-Trichlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 2	< 1	< 2	< 2
Pentachlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	< 2	< 1	< 2	< 2

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 50	< 20	< 50	< 50
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
2-Nitrophenol	1	mg/kg	< 2	< 1	< 2	< 2
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 1	< 0.2	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 2	< 0.4	< 2	< 2
Total cresols*	0.5	mg/kg	< 2	< 0.5	< 2	< 2
4-Nitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
Dinoseb	20	mg/kg	< 50	< 20	< 50	< 50
Phenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Phenol-d6 (surr.)	1	%	86	105	100	97
Total Non-Halogenated Phenol*	20	mg/kg	< 50	< 20	< 50	< 50
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.2	0.6	1.2	1.2
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.4	1.2	2.4	2.4
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
1-Chloronaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1-Naphthylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2.3-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2.4-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.3-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.3.5-Trichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
1.4-Dichlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2-Chloronaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2-Chlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2-Fluorobiphenyl (surr.)	1	%	107	100	100	105
2-Methylnaphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 1	< 0.2	< 1	< 1
2-Naphthylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	< 1
2-Nitrophenol	1	mg/kg	< 2	< 1	< 2	< 2
2-Picoline	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4-Dichlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4-Dinitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
2.4-Dinitrotoluene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.4.5-Trichlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
2.4.6-Tribromophenol (surr.)	1	%	INT	61	INT	INT
2.4.6-Trichlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
2.6-Dichlorophenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 2	< 0.4	< 2	< 2

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3-Methylcholanthrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
3.3'-Dichlorobenzidine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4-Aminobiphenyl	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4-Bromophenyl phenyl ether	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4-Chloro-3-methylphenol	1	mg/kg	< 2	< 1	< 2	< 2
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4-Nitrophenol	5	mg/kg	< 10	< 5	< 10	< 10
4.4'-DDD	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4.4'-DDE	0.5	mg/kg	< 1	< 0.5	< 1	< 1
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
a-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Acenaphthene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Acenaphthylene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Acetophenone	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Aldrin	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Aniline	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
b-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benz(a)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(a)pyrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(g.h.i)perylene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzo(k)fluoranthene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Benzyl chloride	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Chrysene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
d-BHC	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Di-n-butyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Di-n-octyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dibenz(a.j)acridine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dibenzofuran	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dieldrin	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Diethyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dimethyl phthalate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Dimethylaminoazobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Diphenylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endosulfan I	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endosulfan II	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endosulfan sulphate	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endrin	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endrin aldehyde	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Endrin ketone	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Fluoranthene	0.5	mg/kg	< 2	< 0.5	< 2	< 2
Fluorene	0.5	mg/kg	< 1	< 0.5	< 1	< 1

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
g-BHC (Lindane)	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Heptachlor	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Heptachlor epoxide	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Hexachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Hexachlorobutadiene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Methoxychlor	0.5	mg/kg	< 1	< 0.5	< 1	< 1
N-Nitrosodibutylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
N-Nitrosodipropylamine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
N-Nitrosopiperidine	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Naphthalene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Nitrobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Nitrobenzene-d5 (surr.)	1	%	97	101	81	91
Pentachlorobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Pentachloronitrobenzene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Pentachlorophenol	1	mg/kg	< 2	< 1	< 2	< 2
Phenanthrene	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Phenol	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Phenol-d6 (surr.)	1	%	86	105	100	97
Pronamide	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Pyrene	0.5	mg/kg	< 2	< 0.5	< 2	< 2
Trifluralin	0.5	mg/kg	< 1	< 0.5	< 1	< 1
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	9.7	22	15	21
Heavy Metals						
Arsenic	2	mg/kg	5.5	< 2	6.1	3.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	3.2	4.3
Chromium	5	mg/kg	17	< 5	76	74
Copper	5	mg/kg	49	8.1	96	210
Lead	5	mg/kg	110	24	230	150
Mercury	0.1	mg/kg	0.2	0.1	0.5	0.2
Nickel	5	mg/kg	14	< 5	66	46
Zinc	5	mg/kg	160	48	1100	2100
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	%	113	119	117	106

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C5-PFPeA (surr.)	1	%	122	129	132	134
13C5-PFHxA (surr.)	1	%	117	121	128	126
13C4-PFHpA (surr.)	1	%	116	128	138	118
13C8-PFOA (surr.)	1	%	121	117	136	124
13C5-PFNA (surr.)	1	%	114	131	125	126
13C6-PFDA (surr.)	1	%	86	78	96	93
13C2-PFUnDA (surr.)	1	%	84	92	99	76
13C2-PFDoDA (surr.)	1	%	79	86	86	76
13C2-PFTeDA (surr.)	1	%	72	88	64	54
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	%	89	101	86	57
D3-N-MeFOSA (surr.)	1	%	88	112	86	44
D5-N-EtFOSA (surr.)	1	%	96	103	86	64
D7-N-MeFOSE (surr.)	1	%	94	130	94	34
D9-N-EtFOSE (surr.)	1	%	85	109	74	37
D5-N-EtFOSAA (surr.)	1	%	73	73	70	58
D3-N-MeFOSAA (surr.)	1	%	76	80	81	63
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	5.2	< 5
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	121	120	123	95
18O2-PFHxS (surr.)	1	%	90	116	101	99
13C8-PFOS (surr.)	1	%	109	105	129	98
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 FTS (surr.)	1	%	40	28	48	67
13C2-6:2 FTSA (surr.)	1	%	25	49	69	101

Client Sample ID			BH234_0.4	DUP08_210702	SED246	SED247
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl07121	S21-Jl07122	S21-Jl07123	S21-Jl07125
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-8:2 FTSA (surr.)	1	%	INT	64	36	80
13C2-10:2 FTSA (surr.)	1	%	84	84	89	73
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	5.2	< 5
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	5.2	< 5
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	5.2	< 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			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	22	-
TRH C10-C14	20	mg/kg	< 20	< 100	150	-
TRH C15-C28	50	mg/kg	180	< 250	730	-
TRH C29-C36	50	mg/kg	230	< 250	660	-
TRH C10-C36 (Total)	50	mg/kg	410	< 250	1540	-
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH C6-C10	20	mg/kg	< 20	< 20	26	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
TRH >C10-C16	50	mg/kg	62	< 250	250	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	62	< 250	250	-
TRH >C16-C34	100	mg/kg	320	< 500	1600	-
TRH >C34-C40	100	mg/kg	260	< 500	1100	-
TRH >C10-C40 (total)*	100	mg/kg	642	< 500	2950	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	12	-
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	%	69	73	70	-
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	-

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	-
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	12	-
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	12	-
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	%	69	73	70	-
Toluene-d8 (surr.)	1	%	86	94	61	-

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.4	2.4	2.4	-
Acenaphthene	0.5	mg/kg	< 1	< 1	< 1	-
Acenaphthylene	0.5	mg/kg	< 1	< 1	< 1	-
Anthracene	0.5	mg/kg	< 1	< 1	< 1	-
Benz(a)anthracene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(a)pyrene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(k)fluoranthene	0.5	mg/kg	< 1	< 1	< 1	-
Chrysene	0.5	mg/kg	< 1	< 1	< 1	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 1	< 1	-
Fluoranthene	0.5	mg/kg	< 2	< 2	< 2	-
Fluorene	0.5	mg/kg	< 1	< 1	< 1	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 1	< 1	< 1	-
Naphthalene	0.5	mg/kg	< 1	< 1	< 1	-
Phenanthrene	0.5	mg/kg	< 1	< 1	< 1	-
Pyrene	0.5	mg/kg	< 2	< 2	< 2	-
Total PAH*	0.5	mg/kg	< 2	< 2	< 2	-
2-Fluorobiphenyl (surr.)	1	%	108	106	108	-
p-Terphenyl-d14 (surr.)	1	%	89	89	87	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4-Dichlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4.5-Trichlorophenol	1	mg/kg	< 2	< 2	< 2	-
2.4.6-Trichlorophenol	1	mg/kg	< 2	< 2	< 2	-
2.6-Dichlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
4-Chloro-3-methylphenol	1	mg/kg	< 2	< 2	< 2	-
Pentachlorophenol	1	mg/kg	< 2	< 2	< 2	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 2	< 2	< 2	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 50	< 50	< 50	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 10	< 10	< 10	-
2-Nitrophenol	1	mg/kg	< 2	< 2	< 2	-
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4-Dinitrophenol	5	mg/kg	< 10	< 10	< 10	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 1	< 1	< 1	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 2	< 2	30	-
Total cresols*	0.5	mg/kg	< 2	< 2	30	-
4-Nitrophenol	5	mg/kg	< 10	< 10	< 10	-
Dinoseb	20	mg/kg	< 50	< 50	< 50	-
Phenol	0.5	mg/kg	< 1	< 1	< 1	-
Phenol-d6 (surr.)	1	%	99	96	86	-
Total Non-Halogenated Phenol*	20	mg/kg	< 50	< 50	60	-

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	2.4	2.4	2.4	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 10	< 10	< 10	-
1-Chloronaphthalene	0.5	mg/kg	< 1	< 1	< 1	-
1-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	-
1.2-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.2.3-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.2.4-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.3-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.3.5-Trichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
1.4-Dichlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
2-Chloronaphthalene	0.5	mg/kg	< 1	< 1	< 1	-
2-Chlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2-Fluorobiphenyl (surr.)	1	%	108	106	108	-
2-Methylnaphthalene	0.5	mg/kg	< 1	< 1	< 1	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 1	< 1	< 1	-
2-Naphthylamine	0.5	mg/kg	< 1	< 1	< 1	-
2-Nitroaniline	1	mg/kg	< 1	< 1	< 1	-
2-Nitrophenol	1	mg/kg	< 2	< 2	< 2	-
2-Picoline	0.5	mg/kg	< 1	< 1	< 1	-
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4-Dichlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 1	< 1	-
2.4-Dinitrophenol	5	mg/kg	< 10	< 10	< 10	-
2.4-Dinitrotoluene	0.5	mg/kg	< 1	< 1	< 1	-
2.4.5-Trichlorophenol	1	mg/kg	< 2	< 2	< 2	-
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	-
2.4.6-Trichlorophenol	1	mg/kg	< 2	< 2	< 2	-
2.6-Dichlorophenol	0.5	mg/kg	< 1	< 1	< 1	-
2.6-Dinitrotoluene	1	mg/kg	< 1	< 1	< 1	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 2	< 2	30	-
3-Methylcholanthrene	0.5	mg/kg	< 1	< 1	< 1	-
3.3'-Dichlorobenzidine	0.5	mg/kg	< 1	< 1	< 1	-
4-Aminobiphenyl	0.5	mg/kg	< 1	< 1	< 1	-
4-Bromophenyl phenyl ether	0.5	mg/kg	< 1	< 1	< 1	-
4-Chloro-3-methylphenol	1	mg/kg	< 2	< 2	< 2	-
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 1	< 1	< 1	-
4-Nitrophenol	5	mg/kg	< 10	< 10	< 10	-
4.4'-DDD	0.5	mg/kg	< 1	< 1	< 1	-
4.4'-DDE	0.5	mg/kg	< 1	< 1	< 1	-
4.4'-DDT	1	mg/kg	< 1	< 1	< 1	-
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 1	< 1	-
a-BHC	0.5	mg/kg	< 1	< 1	< 1	-
Acenaphthene	0.5	mg/kg	< 1	< 1	< 1	-
Acenaphthylene	0.5	mg/kg	< 1	< 1	< 1	-

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Acetophenone	0.5	mg/kg	< 1	< 1	< 1	-
Aldrin	0.5	mg/kg	< 1	< 1	< 1	-
Aniline	0.5	mg/kg	< 1	< 1	< 1	-
Anthracene	0.5	mg/kg	< 1	< 1	< 1	-
b-BHC	0.5	mg/kg	< 1	< 1	< 1	-
Benz(a)anthracene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(a)pyrene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 1	< 1	< 1	-
Benzo(k)fluoranthene	0.5	mg/kg	< 1	< 1	< 1	-
Benzyl chloride	0.5	mg/kg	< 1	< 1	< 1	-
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 1	< 1	< 1	-
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 1	< 1	< 1	-
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 5	< 5	-
Butyl benzyl phthalate	0.5	mg/kg	< 1	< 1	< 1	-
Chrysene	0.5	mg/kg	< 1	< 1	< 1	-
d-BHC	0.5	mg/kg	< 1	< 1	< 1	-
Di-n-butyl phthalate	0.5	mg/kg	< 1	< 1	< 1	-
Di-n-octyl phthalate	0.5	mg/kg	< 1	< 1	< 1	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 1	< 1	-
Dibenz(a.j)acridine	0.5	mg/kg	< 1	< 1	< 1	-
Dibenzofuran	0.5	mg/kg	< 1	< 1	< 1	-
Dieldrin	0.5	mg/kg	< 1	< 1	< 1	-
Diethyl phthalate	0.5	mg/kg	< 1	< 1	< 1	-
Dimethyl phthalate	0.5	mg/kg	< 1	< 1	< 1	-
Dimethylaminoazobenzene	0.5	mg/kg	< 1	< 1	< 1	-
Diphenylamine	0.5	mg/kg	< 1	< 1	< 1	-
Endosulfan I	0.5	mg/kg	< 1	< 1	< 1	-
Endosulfan II	0.5	mg/kg	< 1	< 1	< 1	-
Endosulfan sulphate	0.5	mg/kg	< 1	< 1	< 1	-
Endrin	0.5	mg/kg	< 1	< 1	< 1	-
Endrin aldehyde	0.5	mg/kg	< 1	< 1	< 1	-
Endrin ketone	0.5	mg/kg	< 1	< 1	< 1	-
Fluoranthene	0.5	mg/kg	< 2	< 2	< 2	-
Fluorene	0.5	mg/kg	< 1	< 1	< 1	-
g-BHC (Lindane)	0.5	mg/kg	< 1	< 1	< 1	-
Heptachlor	0.5	mg/kg	< 1	< 1	< 1	-
Heptachlor epoxide	0.5	mg/kg	< 1	< 1	< 1	-
Hexachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
Hexachlorobutadiene	0.5	mg/kg	< 1	< 1	< 1	-
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 1	< 1	-
Hexachloroethane	0.5	mg/kg	< 1	< 1	< 1	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 1	< 1	< 1	-
Methoxychlor	0.5	mg/kg	< 1	< 1	< 1	-
N-Nitrosodibutylamine	0.5	mg/kg	< 1	< 1	< 1	-
N-Nitrosodipropylamine	0.5	mg/kg	< 1	< 1	< 1	-
N-Nitrosopiperidine	0.5	mg/kg	< 1	< 1	< 1	-
Naphthalene	0.5	mg/kg	< 1	< 1	< 1	-
Nitrobenzene	0.5	mg/kg	< 1	< 1	< 1	-

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Nitrobenzene-d5 (surr.)	1	%	93	96	92	-
Pentachlorobenzene	0.5	mg/kg	< 1	< 1	< 1	-
Pentachloronitrobenzene	0.5	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 2	< 2	< 2	-
Phenanthrene	0.5	mg/kg	< 1	< 1	< 1	-
Phenol	0.5	mg/kg	< 1	< 1	< 1	-
Phenol-d6 (surr.)	1	%	99	96	86	-
Pronamide	0.5	mg/kg	< 1	< 1	< 1	-
Pyrene	0.5	mg/kg	< 2	< 2	< 2	-
Trifluralin	0.5	mg/kg	< 1	< 1	< 1	-
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	-
% Moisture	1	%	54	28	70	2.5
Heavy Metals						
Arsenic	2	mg/kg	2.7	2.7	2.2	-
Cadmium	0.4	mg/kg	1.0	< 0.4	0.6	-
Chromium	5	mg/kg	28	20	49	-
Copper	5	mg/kg	130	130	91	-
Lead	5	mg/kg	92	80	46	-
Mercury	0.1	mg/kg	0.2	0.1	< 0.1	-
Nickel	5	mg/kg	17	15	15	-
Zinc	5	mg/kg	1400	520	1900	-
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	5	ug/kg	< 5	< 5	10	< 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	115	68	105
13C5-PFPeA (surr.)	1	%	118	120	74	121
13C5-PFHxA (surr.)	1	%	115	124	54	113
13C4-PFHpA (surr.)	1	%	98	107	61	109
13C8-PFOA (surr.)	1	%	117	111	67	107
13C5-PFNA (surr.)	1	%	122	123	67	116
13C6-PFDA (surr.)	1	%	79	88	46	84
13C2-PFUnDA (surr.)	1	%	49	82	51	80
13C2-PFDoDA (surr.)	1	%	43	74	46	81
13C2-PFTeDA (surr.)	1	%	34	41	26	60

Client Sample ID			SED248	SED249	SED251	HS240_0.05
Sample Matrix			Soil	Soil	Soil	Rock
Eurofins Sample No.			S21-Jl07126	S21-Jl07127	S21-Jl07128	S21-Jl07129
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	5	ug/kg	< 5	< 5	< 5	< 5
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	10	ug/kg	< 10	< 10	< 10	< 10
13C8-FOSA (surr.)	1	%	41	60	28	72
D3-N-MeFOSA (surr.)	1	%	34	48	26	62
D5-N-EtFOSA (surr.)	1	%	27	56	43	80
D7-N-MeFOSE (surr.)	1	%	26	56	25	55
D9-N-EtFOSE (surr.)	1	%	21	42	22	54
D5-N-EtFOSAA (surr.)	1	%	42	48	29	63
D3-N-MeFOSAA (surr.)	1	%	38	60	35	61
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	%	104	111	76	94
18O2-PFHxS (surr.)	1	%	99	104	69	88
13C8-PFOS (surr.)	1	%	105	109	66	85
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 FTS (surr.)	1	%	58	65	46	49
13C2-6:2 FTSA (surr.)	1	%	60	63	51	70
13C2-8:2 FTSA (surr.)	1	%	77	37	35	73
13C2-10:2 FTSA (surr.)	1	%	60	72	36	64
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			HS241_0.05	HS242_0.05	HS243_0.05	HS244_0.02
Sample Matrix			Rock	Rock	Rock	Rock
Eurofins Sample No.			S21-Jl07130	S21-Jl07131	S21-Jl07132	S21-Jl07133
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
% Moisture	1	%	7.3	3.0	1.2	1.6
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	%	113	117	86	113
13C5-PFPeA (surr.)	1	%	125	123	89	121
13C5-PFHxA (surr.)	1	%	120	117	68	105
13C4-PFHpA (surr.)	1	%	109	118	73	114
13C8-PFOA (surr.)	1	%	105	122	73	100
13C5-PFNA (surr.)	1	%	114	111	47	113
13C6-PFDA (surr.)	1	%	68	86	37	75
13C2-PFUnDA (surr.)	1	%	84	89	41	76
13C2-PFDoDA (surr.)	1	%	73	73	44	72
13C2-PFTeDA (surr.)	1	%	78	74	18	56
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	%	79	98	35	71
D3-N-MeFOSA (surr.)	1	%	82	100	26	64
D5-N-EtFOSA (surr.)	1	%	88	108	37	72
D7-N-MeFOSE (surr.)	1	%	79	90	25	71
D9-N-EtFOSE (surr.)	1	%	81	93	27	53
D5-N-EtFOSAA (surr.)	1	%	70	75	37	55
D3-N-MeFOSAA (surr.)	1	%	74	75	38	64
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

Client Sample ID			HS241_0.05	HS242_0.05	HS243_0.05	HS244_0.02
Sample Matrix			Rock	Rock	Rock	Rock
Eurofins Sample No.			S21-Jl07130	S21-Jl07131	S21-Jl07132	S21-Jl07133
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	113	105	61	102
18O2-PFHxS (surr.)	1	%	97	87	70	96
13C8-PFOS (surr.)	1	%	101	108	62	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	< 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 FTS (surr.)	1	%	53	44	32	52
13C2-6:2 FTSA (surr.)	1	%	38	63	24	53
13C2-8:2 FTSA (surr.)	1	%	50	42	43	51
13C2-10:2 FTSA (surr.)	1	%	84	64	29	70
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

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jul 05, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 05, 2021	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 05, 2021	28 Days
- Method: In-house method E057.2			
% Moisture	Brisbane	Jul 05, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: ERM Hunter Valley
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NSW 2300

Project Name: UNICORN

Order No.:
Report #: 808027
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	GW216	Jul 05, 2021		Water	S21-Jl07104			X				X			X	X	
2	GW219	Jul 05, 2021		Water	S21-Jl07105			X				X			X	X	
3	GW222	Jul 05, 2021		Water	S21-Jl07106			X				X			X	X	
4	GW223	Jul 05, 2021		Water	S21-Jl07107			X				X			X	X	
5	GW225	Jul 05, 2021		Water	S21-Jl07108			X				X			X	X	
6	GW228	Jul 05, 2021		Water	S21-Jl07109			X				X			X	X	
7	20210705_D01	Jul 05, 2021		Water	S21-Jl07110			X				X			X	X	
8	20210705_D02	Jul 05, 2021		Water	S21-Jl07111											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
9	TS	Jul 05, 2021		Soil	S21-Jl07112												X
10	TB	Jul 05, 2021		Soil	S21-Jl07114									X			
11	BH208_0.3	Jul 05, 2021		Soil	S21-Jl07115	X		X			X		X		X	X	
12	BH208_1.2	Jul 05, 2021		Soil	S21-Jl07116	X		X			X		X		X	X	
13	BH209_0.2	Jul 05, 2021		Soil	S21-Jl07117	X		X			X		X		X	X	
14	BH209_1.4	Jul 05, 2021		Soil	S21-Jl07118	X		X			X		X		X	X	
15	BH231_0.1	Jul 05, 2021		Soil	S21-Jl07119	X		X			X		X		X	X	
16	BH234_0.1	Jul 05, 2021		Soil	S21-Jl07120	X		X			X		X		X	X	
17	BH234_0.4	Jul 05, 2021		Soil	S21-Jl07121	X		X			X		X		X	X	
18	DUP08_210702	Jul 05, 2021		Soil	S21-Jl07122	X		X			X		X		X	X	
19	SED246	Jul 05, 2021		Soil	S21-Jl07123	X		X			X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
20	SW_FRAG	Jul 05, 2021		Building Materials	S21-Jl07124		X										
21	SED247	Jul 05, 2021		Soil	S21-Jl07125	X		X			X		X		X	X	
22	SED248	Jul 05, 2021		Soil	S21-Jl07126	X		X			X		X		X	X	
23	SED249	Jul 05, 2021		Soil	S21-Jl07127	X		X			X		X		X	X	
24	SED251	Jul 05, 2021		Soil	S21-Jl07128	X		X			X		X		X	X	
25	HS240_0.05	Jul 05, 2021		Rock	S21-Jl07129					X						X	
26	HS241_0.05	Jul 05, 2021		Rock	S21-Jl07130					X						X	
27	HS242_0.05	Jul 05, 2021		Rock	S21-Jl07131					X						X	
28	HS243_0.05	Jul 05, 2021		Rock	S21-Jl07132					X						X	
29	HS244_0.02	Jul 05, 2021		Rock	S21-Jl07133					X						X	
30	SW245	Jul 05, 2021		Water	S21-Jl07134											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
31	SW246	Jul 05, 2021		Water	S21-Jl07135											X	
32	SW251	Jul 05, 2021		Water	S21-Jl07136											X	
33	BH209_0.1	Jul 05, 2021		Soil	S21-Jl07137				X								
34	BH209_0.7	Jul 05, 2021		Soil	S21-Jl07138				X								
35	GW201_1.5	Jul 05, 2021		Soil	S21-Jl07326				X								
36	GW201_3.0	Jul 05, 2021		Soil	S21-Jl07327				X								
37	SS204_0.1	Jul 05, 2021		Soil	S21-Jl07328				X								
38	SS205_0.1	Jul 05, 2021		Soil	S21-Jl07329				X								
39	BH215_0.4	Jul 05, 2021		Soil	S21-Jl07330				X								
40	BH217_0.4	Jul 05, 2021		Soil	S21-Jl07331				X								
41	DUP06_210701	Jul 05, 2021		Soil	S21-Jl07332				X								

eurofins | Environment Testing

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Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794					X	X					X	
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
Test Counts	13	1	20	9	18	18	7	13	1	20	29	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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
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							
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							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Total Non-Halogenated Phenol*	mg/kg	< 0			20	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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	ug/kg	< 5			5	Pass	
Perfluoropentanoic acid (PFPeA)	ug/kg	< 5			5	Pass	
Perfluorohexanoic acid (PFHxA)	ug/kg	< 5			5	Pass	
Perfluoroheptanoic acid (PFHpA)	ug/kg	< 5			5	Pass	
Perfluorooctanoic acid (PFOA)	ug/kg	< 5			5	Pass	
Perfluorononanoic acid (PFNA)	ug/kg	< 5			5	Pass	
Perfluorodecanoic acid (PFDA)	ug/kg	< 5			5	Pass	
Perfluoroundecanoic acid (PFUnDA)	ug/kg	< 5			5	Pass	
Perfluorododecanoic acid (PFDoDA)	ug/kg	< 5			5	Pass	
Perfluorotridecanoic acid (PFTrDA)	ug/kg	< 5			5	Pass	
Perfluorotetradecanoic acid (PFTeDA)	ug/kg	< 5			5	Pass	
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
TRH C6-C9	%	80			70-130	Pass	
TRH C10-C14	%	83			70-130	Pass	
Naphthalene	%	77			70-130	Pass	
TRH C6-C10	%	79			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	81			70-130	Pass	
Toluene	%	85			70-130	Pass	
Ethylbenzene	%	86			70-130	Pass	
m&p-Xylenes	%	86			70-130	Pass	
o-Xylene	%	86			70-130	Pass	
Xylenes - Total*	%	86			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	116			70-130	Pass	
1.1.1-Trichloroethane	%	94			70-130	Pass	
1.2-Dichlorobenzene	%	103			70-130	Pass	
1.2-Dichloroethane	%	106			70-130	Pass	
Trichloroethene	%	97			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	108			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	98			30-130	Pass	
4-Chloro-3-methylphenol	%	91			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
4-Nitrophenol	%	78			30-130	Pass	
Phenol	%	97			30-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	100			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.4-Dichlorobenzene	%	90			70-130	Pass	
2.4-Dinitrotoluene	%	91			70-130	Pass	
N-Nitrosodipropylamine	%	92			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	93			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	106			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	112			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	107			80-120	Pass	
Mercury	%	109			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	109			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	93			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	94			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	91			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	89			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	96			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	105			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	102			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	85			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	108			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	105			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	96			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	108			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	87			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	87			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)	%	96			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	92			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	86			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	89			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	124			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	109			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	93			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	75			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	92			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	86			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	99			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	98			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	96			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	121			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl07576	NCP	%	87			70-130	Pass	
TRH C6-C10	S21-Jl07576	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jl04798	NCP	%	100			75-125	Pass	
Cadmium	S21-Jl07450	NCP	%	76			75-125	Pass	
Chromium	S21-Jl07450	NCP	%	85			75-125	Pass	
Copper	S21-Jl04798	NCP	%	81			75-125	Pass	
Lead	S21-Jl04798	NCP	%	76			75-125	Pass	
Mercury	S21-Jl07450	NCP	%	79			75-125	Pass	
Nickel	S21-Jl07450	NCP	%	101			75-125	Pass	
Zinc	S21-Jl07450	NCP	%	80			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
Naphthalene	S21-Jl07116	CP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl07116	CP	%	108			70-130	Pass	
Toluene	S21-Jl07116	CP	%	97			70-130	Pass	
Ethylbenzene	S21-Jl07116	CP	%	97			70-130	Pass	
m&p-Xylenes	S21-Jl07116	CP	%	102			70-130	Pass	
o-Xylene	S21-Jl07116	CP	%	94			70-130	Pass	
Xylenes - Total*	S21-Jl07116	CP	%	99			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jl07116	CP	%	110			70-130	Pass	
1.1.1-Trichloroethane	S21-Jl07116	CP	%	90			70-130	Pass	
1.2-Dichlorobenzene	S21-Jl07116	CP	%	92			70-130	Pass	
1.2-Dichloroethane	S21-Jl07116	CP	%	105			70-130	Pass	
Trichloroethene	S21-Jl07116	CP	%	93			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Jl07120	CP	%	74			70-130	Pass	
TRH >C10-C16	S21-Jl07120	CP	%	76			70-130	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl07120	CP	%	104			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07120	CP	%	98			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07120	CP	%	87			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07120	CP	%	96			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07120	CP	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07120	CP	%	94			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07120	CP	%	106			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07120	CP	%	81			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07120	CP	%	106			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07120	CP	%	97			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07120	CP	%	114			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctane sulfonamide (FOSA)	S21-Jl07120	CP	%	112			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07120	CP	%	91			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07120	CP	%	71			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07120	CP	%	83			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07120	CP	%	87			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07120	CP	%	100			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07120	CP	%	97			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07120	CP	%	90			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07120	CP	%	140			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07120	CP	%	119			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07120	CP	%	92			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07120	CP	%	91			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07120	CP	%	85			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07120	CP	%	128			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07120	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)	S21-Jl07120	CP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07120	CP	%	89			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07120	CP	%	119			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07120	CP	%	125			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl07115	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jl07115	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl07115	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jl07115	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jl07115	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jl07115	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jl07115	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jl07115	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jl07115	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl07452	NCP	mg/kg	4.0	5.1	23	30%	Pass	
Cadmium	S21-Jl07452	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl07452	NCP	mg/kg	65	79	19	30%	Pass	
Copper	S21-Jl07452	NCP	mg/kg	26	38	35	30%	Fail	Q15
Lead	S21-Jl07452	NCP	mg/kg	20	15	28	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	S21-Jl07452	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jl07452	NCP	mg/kg	69	91	28	30%	Pass	
Zinc	S21-Jl07452	NCP	mg/kg	47	57	20	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07115	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07115	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07115	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)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07115	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07115	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl07119	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl07119	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S21-Jl07119	CP	mg/kg	50	< 50	16	30%	Pass	
TRH >C10-C16	S21-Jl07119	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S21-Jl07119	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S21-Jl07119	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Acenaphthylene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Anthracene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benz(a)anthracene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Chrysene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Fluoranthene	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Fluorene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Naphthalene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pyrene	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Pentachlorophenol	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl07119	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl07119	CP	mg/kg	< 50	< 50	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl07119	CP	mg/kg	< 10	< 10	<1	30%	Pass	
2-Nitrophenol	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl07119	CP	mg/kg	< 10	< 10	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl07119	CP	mg/kg	< 2	< 2	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
4-Nitrophenol	S21-Jl07119	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Dinoseb	S21-Jl07119	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Phenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1-Naphthylamine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Naphthylamine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDD	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDE	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDT	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
a-BHC	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Acetophenone	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Aldrin	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Aniline	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
b-BHC	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzyl chloride	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl07119	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
d-BHC	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenzofuran	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dieldrin	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Diethyl phthalate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dimethyl phthalate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Diphenylamine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endosulfan I	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Endosulfan II	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endosulfan sulphate	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin aldehyde	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin ketone	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Heptachlor	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Heptachlor epoxide	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Methoxychlor	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Nitrobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pronamide	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Trifluralin	S21-Jl07119	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl07119	CP	%	14	12	17	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07119	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07119	CP	ug/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07119	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)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07119	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07119	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl07126	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S21-Jl07126	CP	mg/kg	180	150	16	30%	Pass	
TRH C29-C36	S21-Jl07126	CP	mg/kg	230	200	13	30%	Pass	
TRH >C10-C16	S21-Jl07126	CP	mg/kg	62	51	20	30%	Pass	
TRH >C16-C34	S21-Jl07126	CP	mg/kg	320	280	14	30%	Pass	
TRH >C34-C40	S21-Jl07126	CP	mg/kg	260	220	16	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Acenaphthylene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Anthracene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benz(a)anthracene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Chrysene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Fluoranthene	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Fluorene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Naphthalene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenanthrene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pyrene	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Pentachlorophenol	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tetrachlorophenols - Total	S21-Jl07126	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	S21-Jl07126	CP	mg/kg	< 50	< 50	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	S21-Jl07126	CP	mg/kg	< 10	< 10	<1	30%	Pass	
2-Nitrophenol	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl07126	CP	mg/kg	< 10	< 10	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl07126	CP	mg/kg	< 2	< 2	<1	30%	Pass	
4-Nitrophenol	S21-Jl07126	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Dinoseb	S21-Jl07126	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Phenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1-Chloronaphthalene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1-Naphthylamine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Naphthylamine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDD	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDE	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4.4'-DDT	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
a-BHC	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Acetophenone	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Aldrin	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Aniline	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
b-BHC	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Benzyl chloride	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl07126	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
d-BHC	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dibenzofuran	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dieldrin	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Diethyl phthalate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dimethyl phthalate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Diphenylamine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endosulfan I	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endosulfan II	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endosulfan sulphate	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin aldehyde	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Endrin ketone	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Heptachlor	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Heptachlor epoxide	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Methoxychlor	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Nitrobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pronamide	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Trifluralin	S21-Jl07126	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl07129	CP	%	2.5	4.0	46	30%	Fail	Q15

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:

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 18217

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Attention: **Ian Batterley**

Report **808027-W**
Project name UNICORN
Received Date Jul 05, 2021

Client Sample ID			**GW216**	**GW219**	**GW222**	**GW223**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-Jl07104**	**S21-Jl07105**	**S21-Jl07106**	**S21-Jl07107**
Date Sampled			**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	0.23	0.50	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	2.1	0.1	0.3	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	2.33	0.6	0.3	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	0.03	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	0.03	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	0.39	0.28	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.39	0.28	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	2.1	0.3	0.3	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	2.49	0.58	0.3	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	81	80	79	83
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	0.004	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	0.015	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	0.004	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	81	80	79	83
Toluene-d8 (surr.)	1	%	78	88	90	79
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	INT	INT	100	71
p-Terphenyl-d14 (surr.)	1	%	73	INT	INT	INT
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Fluorobiphenyl (surr.)	1	%	INT	INT	100	71
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dimethylphenol	0.003	mg/L	0.013	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Tribromophenol (surr.)	1	%	96	INT	144	107
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Nitrobenzene-d5 (surr.)	1	%	75	INT	INT	128
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	INT	INT	62	INT
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heavy Metals						
Arsenic	0.001	mg/L	0.016	0.016	0.045	0.003
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	0.003	< 0.001	0.005	0.004
Copper	0.001	mg/L	0.005	0.002	0.006	0.001
Lead	0.001	mg/L	0.002	< 0.001	< 0.001	0.003
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.007	0.005	0.002	0.001
Zinc	0.005	mg/L	0.011	0.82	0.033	0.008
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.05	0.02	0.05	0.16
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.08	[N09]0.02	[N09]0.04	[N09]0.14
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	0.01	0.03	[N09]0.06
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.04	< 0.01	[N09]0.02	[N09]0.03
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	90	50	75	69
13C5-PFPeA (surr.)	1	%	141	87	124	113
13C5-PFHxA (surr.)	1	%	138	67	119	115

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	141	60	119	121
13C8-PFOA (surr.)	1	%	164	61	136	134
13C5-PFNA (surr.)	1	%	100	38	73	80
13C6-PFDA (surr.)	1	%	176	64	118	118
13C2-PFUnDA (surr.)	1	%	161	62	107	93
13C2-PFDoDA (surr.)	1	%	154	66	99	66
13C2-PFTeDA (surr.)	1	%	153	76	97	31
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	128	61	93	93
D3-N-MeFOSA (surr.)	1	%	102	64	86	41
D5-N-EtFOSA (surr.)	1	%	114	74	95	37
D7-N-MeFOSE (surr.)	1	%	41	39	47	41
D9-N-EtFOSE (surr.)	1	%	51	43	49	37
D5-N-EtFOSAA (surr.)	1	%	164	40	71	72
D3-N-MeFOSAA (surr.)	1	%	178	40	79	85
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.04	< 0.01	< 0.01	0.04
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	0.01	< 0.01	< 0.01	0.02
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	[N09]0.03	< 0.01	< 0.01	[N09]0.02
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.24	[N09]0.02	[N09]0.02	[N09]0.19
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.23	[N09]0.02	[N09]0.02	[N09]0.01
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	97	64	82	88
18O2-PFHxS (surr.)	1	%	81	47	74	70
13C8-PFOS (surr.)	1	%	92	48	76	76
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	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	0.06
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	INT	56	130	151
13C2-6:2 FTSA (surr.)	1	%	INT	59	INT	INT
13C2-8:2 FTSA (surr.)	1	%	INT	35	142	113
13C2-10:2 FTSA (surr.)	1	%	INT	30	81	49

Client Sample ID			GW216	GW219	GW222	GW223
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07104	S21-Jl07105	S21-Jl07106	S21-Jl07107
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.47	0.04	0.04	0.2
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.27	0.02	0.04	0.04
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.51	0.04	0.06	0.23
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.69	0.09	0.18	0.69
Sum of PFASs (n=30)*	0.1	ug/L	0.74	< 0.1	0.18	0.73

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	0.03	< 0.02	-
TRH C10-C14	0.05	mg/L	< 0.05	1.1	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	1.1	< 0.1	-
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH C6-C10	0.02	mg/L	< 0.02	0.04	< 0.02	-
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	0.04	< 0.02	-
TRH >C10-C16	0.05	mg/L	< 0.05	1.2	< 0.05	-
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	1.2	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	0.5	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	1.7	< 0.1	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
4-Bromofluorobenzene (surr.)	1	%	79	75	79	-
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Isopropyl benzene (Cumene)	0.001	mg/L	< 0.001	0.002	< 0.001	-
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	-
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Total MAH*	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Bromofluorobenzene (surr.)	1	%	79	75	79	-
Toluene-d8 (surr.)	1	%	82	89	87	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Fluorobiphenyl (surr.)	1	%	59	INT	115	-
p-Terphenyl-d14 (surr.)	1	%	INT	144	INT	-
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2-Fluorobiphenyl (surr.)	1	%	59	INT	115	-
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	-
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	-
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	-
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
a-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
b-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
d-BHC	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
g-BHC (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Nitrobenzene-d5 (surr.)	1	%	150	132	INT	-
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	-
Phenol-d6 (surr.)	1	%	65	INT	53	-
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Heavy Metals						
Arsenic	0.001	mg/L	0.005	0.008	0.016	-
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	0.008	0.007	0.003	-
Lead	0.001	mg/L	< 0.001	0.002	< 0.001	-
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel	0.001	mg/L	0.006	0.013	0.004	-
Zinc	0.005	mg/L	0.057	0.28	0.77	-
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	0.06	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.02	0.18	0.02	0.05
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	[N09]0.02	[N09]0.16	[N09]0.02	[N09]0.04
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	0.01	[N09]0.08	[N09]0.01	[N09]0.03
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.01	[N09]0.07	< 0.01	[N09]0.02
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	123	102	95	84
13C5-PFPeA (surr.)	1	%	187	149	180	129
13C5-PFHxA (surr.)	1	%	168	180	170	113

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
13C4-PFHpA (surr.)	1	%	162	173	165	107
13C8-PFOA (surr.)	1	%	185	197	179	120
13C5-PFNA (surr.)	1	%	111	127	112	70
13C6-PFDA (surr.)	1	%	174	INT	171	127
13C2-PFUnDA (surr.)	1	%	157	INT	192	103
13C2-PFDoDA (surr.)	1	%	137	INT	INT	99
13C2-PFTeDA (surr.)	1	%	110	INT	INT	71
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	134	INT	135	95
D3-N-MeFOSA (surr.)	1	%	121	195	150	84
D5-N-EtFOSA (surr.)	1	%	128	INT	175	89
D7-N-MeFOSE (surr.)	1	%	65	97	71	47
D9-N-EtFOSE (surr.)	1	%	67	102	77	48
D5-N-EtFOSAA (surr.)	1	%	103	INT	93	55
D3-N-MeFOSAA (surr.)	1	%	115	INT	96	62
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	0.05	< 0.01	< 0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	0.01	< 0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	[N09]0.04	< 0.01	< 0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]0.04	[N09]0.32	[N09]0.02	[N09]0.02
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	[N09]0.04	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]0.07	[N09]2.9	[N09]0.02	[N09]0.02
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	122	164	155	74
18O2-PFHxS (surr.)	1	%	101	115	135	63
13C8-PFOS (surr.)	1	%	108	140	149	75
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	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	163	INT	156	132
13C2-6:2 FTSA (surr.)	1	%	INT	INT	INT	INT
13C2-8:2 FTSA (surr.)	1	%	INT	INT	132	144
13C2-10:2 FTSA (surr.)	1	%	152	INT	132	79

Client Sample ID			GW225	GW228	20210705_D01	20210705_D02
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl07108	S21-Jl07109	S21-Jl07110	S21-Jl07111
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	0.11	3.22	0.04	0.04
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.08	2.97	0.02	0.04
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.12	3.29	0.04	0.06
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.17	3.82	0.09	0.18
Sum of PFASs (n=30)*	0.1	ug/L	0.17	3.91	< 0.1	0.18

Client Sample ID			SW245	SW246	SW251
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S21-Jl07134	S21-Jl07135	S21-Jl07136
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit			
Perfluoroalkyl carboxylic acids (PFCAs)					
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	0.09
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	< 0.01	0.07	< 0.01
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.02	[N09]0.02	0.02
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.01	< 0.01	< 0.01
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.02	< 0.01	< 0.01
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	79	52	28
13C5-PFPeA (surr.)	1	%	123	83	64
13C5-PFHxA (surr.)	1	%	122	90	96
13C4-PFHpA (surr.)	1	%	54	84	93
13C8-PFOA (surr.)	1	%	131	131	123
13C5-PFNA (surr.)	1	%	54	80	63
13C6-PFDA (surr.)	1	%	161	129	109
13C2-PFUnDA (surr.)	1	%	121	86	78
13C2-PFDoDA (surr.)	1	%	91	45	65
13C2-PFTeDA (surr.)	1	%	166	13	35
Perfluoroalkyl sulfonamido substances					
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	74	55	68
D3-N-MeFOSA (surr.)	1	%	90	13	36
D5-N-EtFOSA (surr.)	1	%	105	10	45

Client Sample ID			SW245	SW246	SW251
Sample Matrix			Water	Water	Water
Eurofins Sample No.			S21-JI07134	S21-JI07135	S21-JI07136
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit			
Perfluoroalkyl sulfonamido substances					
D7-N-MeFOSE (surr.)	1	%	39	22	8.0
D9-N-EtFOSE (surr.)	1	%	62	17	21
D5-N-EtFOSAA (surr.)	1	%	104	44	99
D3-N-MeFOSAA (surr.)	1	%	73	106	103
Perfluoroalkyl sulfonic acids (PFSAs)					
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	< 0.01	< 0.01	0.01
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	0.01	< 0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	< 0.01	< 0.01	[N09]0.01
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	< 0.01	< 0.01	[N09]0.09
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	0.07	[N09]0.03	[N09]0.02
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	96	89	80
18O2-PFHxS (surr.)	1	%	79	73	75
13C8-PFOS (surr.)	1	%	94	81	77
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	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	0.05	0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01
13C2-4:2 FTS (surr.)	1	%	INT	181	INT
13C2-6:2 FTSA (surr.)	1	%	INT	INT	INT
13C2-8:2 FTSA (surr.)	1	%	INT	INT	INT
13C2-10:2 FTSA (surr.)	1	%	140	115	169
PFASs Summations					
Sum (PFHxS + PFOS)*	0.01	ug/L	0.07	0.03	0.11
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	0.09	0.03	0.02
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	0.09	0.03	0.11
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	0.18	0.17	0.23
Sum of PFASs (n=30)*	0.1	ug/L	0.18	0.18	0.24

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 05, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jul 06, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 05, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 05, 2021	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 06, 2021	28 Days
- Method: In-house method E057.1			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 06, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

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Company Name: ERM Hunter Valley
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NSW 2300

Project Name: UNICORN

Order No.:
Report #: 808027
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**												
1	GW216	Jul 05, 2021		Water	S21-Jl07104			X				X			X	X	
2	GW219	Jul 05, 2021		Water	S21-Jl07105			X				X			X	X	
3	GW222	Jul 05, 2021		Water	S21-Jl07106			X				X			X	X	
4	GW223	Jul 05, 2021		Water	S21-Jl07107			X				X			X	X	
5	GW225	Jul 05, 2021		Water	S21-Jl07108			X				X			X	X	
6	GW228	Jul 05, 2021		Water	S21-Jl07109			X				X			X	X	
7	20210705_D01	Jul 05, 2021		Water	S21-Jl07110			X				X			X	X	
8	20210705_D02	Jul 05, 2021		Water	S21-Jl07111											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
9	TS	Jul 05, 2021		Soil	S21-Jl07112												X
10	TB	Jul 05, 2021		Soil	S21-Jl07114									X			
11	BH208_0.3	Jul 05, 2021		Soil	S21-Jl07115	X		X			X		X		X	X	
12	BH208_1.2	Jul 05, 2021		Soil	S21-Jl07116	X		X			X		X		X	X	
13	BH209_0.2	Jul 05, 2021		Soil	S21-Jl07117	X		X			X		X		X	X	
14	BH209_1.4	Jul 05, 2021		Soil	S21-Jl07118	X		X			X		X		X	X	
15	BH231_0.1	Jul 05, 2021		Soil	S21-Jl07119	X		X			X		X		X	X	
16	BH234_0.1	Jul 05, 2021		Soil	S21-Jl07120	X		X			X		X		X	X	
17	BH234_0.4	Jul 05, 2021		Soil	S21-Jl07121	X		X			X		X		X	X	
18	DUP08_210702	Jul 05, 2021		Soil	S21-Jl07122	X		X			X		X		X	X	
19	SED246	Jul 05, 2021		Soil	S21-Jl07123	X		X			X		X		X	X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
20	SW_FRAG	Jul 05, 2021		Building Materials	S21-Jl07124		X										
21	SED247	Jul 05, 2021		Soil	S21-Jl07125	X		X			X		X		X	X	
22	SED248	Jul 05, 2021		Soil	S21-Jl07126	X		X			X		X		X	X	
23	SED249	Jul 05, 2021		Soil	S21-Jl07127	X		X			X		X		X	X	
24	SED251	Jul 05, 2021		Soil	S21-Jl07128	X		X			X		X		X	X	
25	HS240_0.05	Jul 05, 2021		Rock	S21-Jl07129					X						X	
26	HS241_0.05	Jul 05, 2021		Rock	S21-Jl07130					X						X	
27	HS242_0.05	Jul 05, 2021		Rock	S21-Jl07131					X						X	
28	HS243_0.05	Jul 05, 2021		Rock	S21-Jl07132					X						X	
29	HS244_0.02	Jul 05, 2021		Rock	S21-Jl07133					X						X	
30	SW245	Jul 05, 2021		Water	S21-Jl07134											X	

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Melbourne Laboratory - NATA Site # 1254																	
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794										X	X					X	
Perth Laboratory - NATA Site # 23736																	
Mayfield Laboratory - NATA Site # 25079																	
External Laboratory																	
31	SW246	Jul 05, 2021		Water	S21-Jl07135											X	
32	SW251	Jul 05, 2021		Water	S21-Jl07136											X	
33	BH209_0.1	Jul 05, 2021		Soil	S21-Jl07137				X								
34	BH209_0.7	Jul 05, 2021		Soil	S21-Jl07138				X								
35	GW201_1.5	Jul 05, 2021		Soil	S21-Jl07326				X								
36	GW201_3.0	Jul 05, 2021		Soil	S21-Jl07327				X								
37	SS204_0.1	Jul 05, 2021		Soil	S21-Jl07328				X								
38	SS205_0.1	Jul 05, 2021		Soil	S21-Jl07329				X								
39	BH215_0.4	Jul 05, 2021		Soil	S21-Jl07330				X								
40	BH217_0.4	Jul 05, 2021		Soil	S21-Jl07331				X								
41	DUP06_210701	Jul 05, 2021		Soil	S21-Jl07332				X								

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Project Name: UNICORN

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Received: Jul 5, 2021 4:42 PM
Due: Jul 6, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail	Asbestos - AS4964	Asbestos Absence /Presence	Chromium (hexavalent)	HOLD	Moisture Set	Moisture Set	Eurofins Suite B7	Eurofins Suite B7A	BTEXN and Volatile TRH	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX and Naphthalene
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217	X	X	X	X	X	X	X	X	X	X		X
Brisbane Laboratory - NATA Site # 20794					X	X					X	
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
Test Counts	13	1	20	9	18	18	7	13	1	20	29	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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.005			0.005	Pass	
1.2-Dichlorobenzene	mg/L	< 0.005			0.005	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	< 0.005			0.005	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005			0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Naphthylamine	mg/L	< 0.005			0.005	Pass	
2-Nitroaniline	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	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	
2.6-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005			0.005	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005			0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
4.4'-DDD	mg/L	< 0.005			0.005	Pass	
4.4'-DDE	mg/L	< 0.005			0.005	Pass	
4.4'-DDT	mg/L	< 0.005			0.005	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.005			0.005	Pass	
a-BHC	mg/L	< 0.005			0.005	Pass	
Acetophenone	mg/L	< 0.005			0.005	Pass	
Aldrin	mg/L	< 0.005			0.005	Pass	
Aniline	mg/L	< 0.005			0.005	Pass	
b-BHC	mg/L	< 0.005			0.005	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005			0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005			0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005			0.005	Pass	
d-BHC	mg/L	< 0.005			0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005			0.005	Pass	
Di-n-octyl phthalate	mg/L	< 0.005			0.005	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.005			0.005	Pass	
Dieldrin	mg/L	< 0.005			0.005	Pass	
Diethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005			0.005	Pass	
Diphenylamine	mg/L	< 0.005			0.005	Pass	
Endosulfan I	mg/L	< 0.005			0.005	Pass	
Endosulfan II	mg/L	< 0.005			0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005			0.005	Pass	
Endrin	mg/L	< 0.005			0.005	Pass	
Endrin aldehyde	mg/L	< 0.005			0.005	Pass	
Endrin ketone	mg/L	< 0.005			0.005	Pass	
g-BHC (Lindane)	mg/L	< 0.005			0.005	Pass	
Heptachlor	mg/L	< 0.005			0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005			0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005			0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorocyclopentadiene	mg/L	< 0.005			0.005	Pass	
Hexachloroethane	mg/L	< 0.005			0.005	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005			0.005	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.005			0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Chromium (hexavalent)	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)							
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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
TRH C6-C9	%	102			70-130	Pass	
TRH C10-C14	%	75			70-130	Pass	
Naphthalene	%	112			70-130	Pass	
TRH C6-C10	%	103			70-130	Pass	
TRH >C10-C16	%	101			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	116			70-130	Pass	
Ethylbenzene	%	110			70-130	Pass	
m&p-Xylenes	%	124			70-130	Pass	
o-Xylene	%	108			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	95			70-130	Pass	
1.2-Dichlorobenzene	%	101			70-130	Pass	
1.2-Dichloroethane	%	98			70-130	Pass	
Trichloroethene	%	113			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	84			70-130	Pass	
Pyrene	%	87			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	109			70-130	Pass	
1.3.5-Trichlorobenzene	%	109			70-130	Pass	
1.4-Dichlorobenzene	%	91			70-130	Pass	
2-Chlorophenol	%	98			30-130	Pass	
2.4-Dinitrotoluene	%	89			70-130	Pass	
4-Chloro-3-methylphenol	%	100			30-130	Pass	
N-Nitrosodipropylamine	%	101			70-130	Pass	
Pentachlorophenol	%	93			30-130	Pass	
Phenol	%	77			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	102			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	
Cadmium	%	95			80-120	Pass	
Chromium	%	96			80-120	Pass	
Copper	%	93			80-120	Pass	
Lead	%	93			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	%	99			80-120	Pass	
Nickel	%	95			80-120	Pass	
Zinc	%	93			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	91			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	88			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	90			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	92			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	87			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	83			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	92			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	88			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	112			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	85			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	87			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	92			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	87			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	95			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	83			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	80			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	78			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	103			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	80			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	74			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	76			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	72			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	87			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	98			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	86			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)	%	85			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	85			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl06801	NCP	%	94			70-130	Pass	
Naphthalene	S21-Jl06801	NCP	%	122			70-130	Pass	
TRH C6-C10	S21-Jl06801	NCP	%	94			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl06801	NCP	%	87			70-130	Pass	
Toluene	S21-Jl06801	NCP	%	94			70-130	Pass	
Ethylbenzene	S21-Jl06801	NCP	%	91			70-130	Pass	
m&p-Xylenes	S21-Jl06801	NCP	%	90			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	S21-Jl06801	NCP	%	89			70-130	Pass	
Xylenes - Total*	S21-Jl06801	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jl04552	NCP	%	128			70-130	Pass	
1.1.1-Trichloroethane	S21-Jl04552	NCP	%	127			70-130	Pass	
1.2-Dichlorobenzene	S21-Jl04552	NCP	%	101			70-130	Pass	
1.2-Dichloroethane	S21-Jl04552	NCP	%	104			70-130	Pass	
Trichloroethene	S21-Jl04552	NCP	%	112			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Jl07325	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Zinc	S21-Jl03700	NCP	%	86			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C10-C14	S21-Jl07109	CP	%	74			70-130	Pass	
TRH >C10-C16	S21-Jl07109	CP	%	101			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jl07110	CP	%	103			75-125	Pass	
Cadmium	S21-Jl07110	CP	%	99			75-125	Pass	
Chromium	S21-Jl07110	CP	%	99			75-125	Pass	
Copper	S21-Jl07110	CP	%	93			75-125	Pass	
Lead	S21-Jl07110	CP	%	96			75-125	Pass	
Mercury	S21-Jl07110	CP	%	103			75-125	Pass	
Nickel	S21-Jl07110	CP	%	96			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl07134	CP	%	106			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07134	CP	%	93			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07134	CP	%	91			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07134	CP	%	93			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07134	CP	%	93			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07134	CP	%	94			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07134	CP	%	94			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07134	CP	%	96			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07134	CP	%	100			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07134	CP	%	134			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07134	CP	%	86			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jl07134	CP	%	91			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07134	CP	%	94			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07134	CP	%	93			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07134	CP	%	107			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07134	CP	%	100			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07134	CP	%	86			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07134	CP	%	82			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07134	CP	%	79			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07134	CP	%	77			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07134	CP	%	62			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07134	CP	%	68			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07134	CP	%	86			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07134	CP	%	68			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07134	CP	%	90			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07134	CP	%	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)	S21-Jl07134	CP	%	88			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07134	CP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07134	CP	%	81			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07134	CP	%	93			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl06802	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	N21-Jl01066	NCP	mg/L	13	11	24	30%	Pass	
TRH C15-C28	N21-Jl01066	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
TRH C29-C36	N21-Jl01066	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl06802	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Jl06802	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	N21-Jl01066	NCP	mg/L	5.8	3.8	43	30%	Fail	Q15
TRH >C16-C34	N21-Jl01066	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
TRH >C34-C40	N21-Jl01066	NCP	mg/L	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl06802	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Jl06802	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Jl06802	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Jl06802	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Jl06802	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Jl06802	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Duplicate								
Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1-Dichloroethene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1-Trichloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2-Trichloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dibromoethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichlorobenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2-Dichloropropane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.3-Trichloropropane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.2.4-Trimethylbenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichlorobenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3-Dichloropropane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.3.5-Trimethylbenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
1.4-Dichlorobenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Butanone (MEK)	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
2-Propanone (Acetone)	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Chlorotoluene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
4-Methyl-2-pentanone (MIBK)	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Allyl chloride	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromobenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromochloromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromodichloromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromoform	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Bromomethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon disulfide	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Carbon Tetrachloride	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chlorobenzene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Chloroform	S21-Jl04553	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Chloromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.2-Dichloroethene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
cis-1.3-Dichloropropene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromochloromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dibromomethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Dichlorodifluoromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Iodomethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Isopropyl benzene (Cumene)	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Methylene Chloride	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Styrene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Tetrachloroethene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.2-Dichloroethene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
trans-1.3-Dichloropropene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichloroethene	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Trichlorofluoromethane	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Vinyl chloride	S21-Jl04553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
Chromium (hexavalent)	S21-Jl07325	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl07105	CP	mg/L	0.016	0.017	2.0	30%	Pass	
Cadmium	S21-Jl07105	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jl07105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S21-Jl07105	CP	mg/L	0.002	0.002	1.0	30%	Pass	
Lead	S21-Jl07105	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S21-Jl07105	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jl07105	CP	mg/L	0.005	0.005	2.0	30%	Pass	
Zinc	S21-Jl07105	CP	mg/L	0.82	0.85	3.0	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07105	CP	ug/L	0.02	0.02	5.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07105	CP	ug/L	0.02	0.02	5.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07105	CP	ug/L	0.01	0.01	2.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07105	CP	ug/L	0.02	0.02	14	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07105	CP	ug/L	0.02	0.01	10	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07105	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)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07105	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07105	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl07109	CP	mg/L	0.008	0.008	3.0	30%	Pass	
Cadmium	S21-Jl07109	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jl07109	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	S21-Jl07109	CP	mg/L	0.007	0.008	5.0	30%	Pass	
Lead	S21-Jl07109	CP	mg/L	0.002	0.003	11	30%	Pass	
Mercury	S21-Jl07109	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jl07109	CP	mg/L	0.013	0.013	<1	30%	Pass	
Zinc	S21-Jl07109	CP	mg/L	0.28	0.29	2.0	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S21-Jl07110	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	S21-Jl07110	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
1-Chloronaphthalene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1-Naphthylamine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chlorophenol	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methylphenol (o-Cresol)	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Naphthylamine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitroaniline	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitrophenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2-Picoline	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl07110	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl07110	CP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Nitrophenol	S21-Jl07110	CP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
4.4'-DDD	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDE	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDT	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
a-BHC	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Acetophenone	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aldrin	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aniline	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
b-BHC	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Benzyl chloride	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
d-BHC	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenzofuran	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dieldrin	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diethyl phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethyl phthalate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diphenylamine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan I	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan II	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan sulphate	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin aldehyde	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin ketone	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Heptachlor epoxide	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachloroethane	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Methoxychlor	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Nitrobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorophenol	S21-Jl07110	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Phenol	S21-Jl07110	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Pronamide	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Trifluralin	S21-Jl07110	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl07110	CP	ug/L	0.02	0.02	1.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl07110	CP	ug/L	0.02	0.02	6.0	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl07110	CP	ug/L	0.01	0.01	1.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl07110	CP	ug/L	0.02	0.02	12	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl07110	CP	ug/L	0.02	0.02	3.0	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl07110	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)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl07110	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl07110	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl07110	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
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.

Authorised by:

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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Grace Tuckwell

From: Anthony Richard <anthony.richard@erm.com>
Sent: Tuesday, 6 July 2021 12:28 PM
To: #AU04_Enviro_Sample_NSW
Cc: Michael Mercer; Ian Batterley
Subject: RE: Attention: Eurofins Sample Receipt Advice - Report 808027 : Site UNICORN

Follow Up Flag: Flag for follow up
Flag Status: Completed

Categories: Additional

EXTERNAL EMAIL*

Hi Everyone,

Sorry for the confusion. Please undertake the following analysis on the samples. 24hr turnaround please.

Please contact me with any further queries

SED250	**PLEASE DO NOT FORWARD TO ALS** Analyse as per COC (PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE)) and Hexavalent Chromium)
SED250 (2nd Entry)	Please amend COC to Sample ID SED251 and analyse as per COC (PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE)) and Hexavalent Chromium)
SW251	As stated below. Please log as SW251 ID and analyse as per COC (PFAS)
SS204_0.1	Please analyse for (PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE)) and Hexavalent Chromium
SS205_0.1	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE)) and Hexavalent Chromium
GW201_1.5	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
GW201_3.0	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
BH215_0.4	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
BH217_0.4	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
DUP06_210701	Please analyse for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
TRIP08_210702	Please forward to ALS for analysis (PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE), Hexavalent Chromium and asbestos in Soils (+/-ve)
20210705_T01	Please forward to ALS for analysis for PFAS, Suite B7, SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE) and Hexavalent Chromium

20210705_T02 Please forward to ALS for PFAS analysis

Sincerely

Anthony Richard
Senior Consultant

ERM
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From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Monday, July 5, 2021 7:50 PM
To: Michael Mercer <Michael.Mercer@erm.com>; Anthony Richard <anthony.richard@erm.com>
Subject: Re: Attention: Eurofins Sample Receipt Advice - Report 808027 : Site UNICORN

Hey team - can we get these sorted in the morning please. Just create a table with each item raised and provide a clear instruction for each

Please note that this will be in a data room for potential purchasers of the site to review so keep answers very simple and to the point and reduce back and forth with lab

Ian

Get Outlook for iOS

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Monday, July 5, 2021 7:46:07 PM
To: Ian Batterley <Ian.Batterley@erm.com>
Cc: Michael Mercer <Michael.Mercer@erm.com>
Subject: Attention: Eurofins Sample Receipt Advice - Report 808027 : Site UNICORN

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,

SED250 written twice on COC and SED251 received extra, SED251 kept at Eurofins and SED250 (jar, bag and tub) forwarded to ALS.
SW251 received instead of SW250, logged as per ID on sample.
GW201_1.5, GW201_3.0, SS204_0.1, SS205_0.1, BH215_0.4, BH217_0.4 and DUP06_210701 (jar, bag and tub) received extra and placed on hold.
TRIP06_210701 (jar, bag and tub) also received extra and forwarded to ALS.
20210705_T01 (PFAS, chromium, metals, amber and two vials), 20210705_T02 (PFAS) and TRIP08_210702 (jar, bag and tub) forwarded to ALS.

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

Regards

Grace Tuckwell
Sample Receipt

Eurofins | Environment Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 29900 8421
Email: EnviroSampleNSW@eurofins.com
Website:environment.eurofins.com.au

EnviroNote 1114 - Eurofins Mould Testing Laboratory is now NATA accredited
EnviroNote 1115 - Eurofins SYDNEY Laboratory is now NATA accredited for PFAS

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NATA # 1261 Site # 18217

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

Sample Receipt Advice

Company name:	ERM Hunter Valley
Contact name:	Ian Batterley
Project name:	ADDITIONAL UNICORN
Project ID:	Not provided
Turnaround time:	1 Day
Date/Time received	Jul 6, 2021 12:28 PM
Eurofins reference	808299

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 6.6 degrees Celsius.
✓	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:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@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 Hunter Valley email address.

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: ADDITIONAL UNICORN

Order No.:
Report #: 808299
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 6, 2021 12:28 PM
Due: Jul 7, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	Moisture Set	Eurofins Suite B7	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794											X
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	SS204_0.1	Jul 05, 2021		Soil	S21-Jl09037		X	X	X	X	X
2	SS205_0.1	Jul 05, 2021		Soil	S21-Jl09038		X	X	X	X	X
3	GW201_1.5	Jul 05, 2021		Soil	S21-Jl09039	X	X	X	X	X	X
4	GW201_3.0	Jul 05, 2021		Soil	S21-Jl09040	X	X	X	X	X	X
5	BH215_0.4	Jul 05, 2021		Soil	S21-Jl09041	X	X	X	X	X	X
6	BH217_0.4	Jul 05, 2021		Soil	S21-Jl09042	X	X	X	X	X	X
7	DUP06_210701	Jul 05, 2021		Soil	S21-Jl09043	X	X	X	X	X	X
8	SED250	Jul 05, 2021		Soil	S21-Jl09044		X	X	X	X	X
Test Counts						5	8	8	8	8	8

Certificate of Analysis

NATA Accredited
Accreditation Number 1261
Site Number 18217

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

Attention:	Ian Batterley
Report	808299-AID
Project Name	ADDITIONAL UNICORN
Received Date	Jul 06, 2021
Date Reported	Jul 08, 2021

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.*

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Project Name ADDITIONAL UNICORN
Project ID
Date Sampled Jul 05, 2021
Report 808299-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
GW201_1.5	21-Jl09039	Jul 05, 2021	Approximate Sample 641g 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.
GW201_3.0	21-Jl09040	Jul 05, 2021	Approximate Sample 535g 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.
BH215_0.4	21-Jl09041	Jul 05, 2021	Approximate Sample 654g Sample consisted of: Brown coarse-grained soil, brick, glass, cement, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w.* Organic fibre detected. No trace asbestos detected.
BH217_0.4	21-Jl09042	Jul 05, 2021	Approximate Sample 561g Sample consisted of: Brown coarse-grained soil, bitumen, brick and rocks	No asbestos detected at the reporting limit of 0.01% w/w.* Organic fibre detected. No trace asbestos detected.
DUP06_210701	21-Jl09043	Jul 05, 2021	Approximate Sample 731g Sample consisted of: Brown coarse-grained sandy soil, bitumen 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 is reported.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 06, 2021	Indefinite

eurofins | Environment Testing

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

Project Name: ADDITIONAL UNICORN

Order No.:
Report #: 808299
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 6, 2021 12:28 PM
Due: Jul 8, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	Moisture Set	Eurofins Suite B7	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794											X	X
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	SS204_0.1	Jul 05, 2021		Soil	S21-Jl09037		X	X	X	X	X	
2	SS205_0.1	Jul 05, 2021		Soil	S21-Jl09038		X	X	X	X	X	
3	GW201_1.5	Jul 05, 2021		Soil	S21-Jl09039	X	X	X	X	X	X	
4	GW201_3.0	Jul 05, 2021		Soil	S21-Jl09040	X	X	X	X	X	X	
5	BH215_0.4	Jul 05, 2021		Soil	S21-Jl09041	X	X	X	X	X	X	
6	BH217_0.4	Jul 05, 2021		Soil	S21-Jl09042	X	X	X	X	X	X	
7	DUP06_210701	Jul 05, 2021		Soil	S21-Jl09043	X	X	X	X	X		X
8	SED250	Jul 05, 2021		Soil	S21-Jl09044		X	X	X	X		X
Test Counts						5	8	8	8	8	8	8

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 Hunter Valley
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Newcastle
NSW 2300

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
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Attention: **Ian Batterley**

Report **808299-S**
Project name ADDITIONAL UNICORN
Received Date Jul 06, 2021

Client Sample ID			**SS204_0.1**	**SS205_0.1**	**GW201_1.5**	**GW201_3.0**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**S21-Jl09037**	**S21-Jl09038**	**S21-Jl09039**	**S21-Jl09040**
Date Sampled			**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**	**Jul 05, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
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
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	%	79	81	78	72
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

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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
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	%	79	81	78	72
Toluene-d8 (surr.)	1	%	96	103	102	94
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

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
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	%	109	112	113	111
p-Terphenyl-d14 (surr.)	1	%	98	94	112	110
Semivolatile Organics						
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
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	< 5
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-Fluorobiphenyl (surr.)	1	%	109	112	113	111
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	< 1	< 1	< 1	< 1
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

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	68	69
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
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

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
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
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
Nitrobenzene-d5 (surr.)	1	%	106	111	120	119
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
Phenol-d6 (surr.)	1	%	110	112	117	112
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
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	4.2	4.6	15	23
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	11	15	< 5	< 5
Copper	5	mg/kg	21	30	< 5	< 5
Lead	5	mg/kg	5.7	< 5	< 5	< 5
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	41	69	< 5	< 5
Zinc	5	mg/kg	110	58	8.9	< 5
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

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
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	%	122	121	125	121
13C5-PFPeA (surr.)	1	%	129	132	124	117
13C5-PFHxA (surr.)	1	%	82	89	91	86
13C4-PFHpA (surr.)	1	%	100	99	98	98
13C8-PFOA (surr.)	1	%	108	85	94	97
13C5-PFNA (surr.)	1	%	105	90	105	106
13C6-PFDA (surr.)	1	%	100	106	97	87
13C2-PFUnDA (surr.)	1	%	91	86	100	106
13C2-PFDoDA (surr.)	1	%	84	95	110	99
13C2-PFTeDA (surr.)	1	%	85	109	127	126
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	%	89	100	113	124
D3-N-MeFOSA (surr.)	1	%	69	105	132	134
D5-N-EtFOSA (surr.)	1	%	76	111	112	110
D7-N-MeFOSE (surr.)	1	%	61	86	134	124
D9-N-EtFOSE (surr.)	1	%	31	73	113	96
D5-N-EtFOSAA (surr.)	1	%	63	83	99	86
D3-N-MeFOSAA (surr.)	1	%	72	89	99	95
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	[N09]12	[N09]8.1
Perfluorodecanesulfonic acid (PFDS)[N15]	5	ug/kg	< 5	< 5	< 5	< 5
13C3-PFBS (surr.)	1	%	86	91	87	98
18O2-PFHxS (surr.)	1	%	111	106	95	82
13C8-PFOS (surr.)	1	%	80	93	103	100

Client Sample ID			SS204_0.1	SS205_0.1	GW201_1.5	GW201_3.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09037	S21-Jl09038	S21-Jl09039	S21-Jl09040
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
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	< 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 FTS (surr.)	1	%	147	146	110	76
13C2-6:2 FTSA (surr.)	1	%	126	130	89	72
13C2-8:2 FTSA (surr.)	1	%	116	105	121	99
13C2-10:2 FTSA (surr.)	1	%	79	93	106	99
PFASs Summations						
Sum (PFHxS + PFOS)*	5	ug/kg	< 5	< 5	12	8.1
Sum of US EPA PFAS (PFOS + PFOA)*	5	ug/kg	< 5	< 5	12	8.1
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	5	ug/kg	< 5	< 5	12	8.1
Sum of WA DWER PFAS (n=10)*	10	ug/kg	< 10	< 10	12	< 10
Sum of PFASs (n=30)*	50	ug/kg	< 50	< 50	< 50	< 50

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 200	< 200	< 100
TRH C15-C28	50	mg/kg	< 50	730	520	< 250
TRH C29-C36	50	mg/kg	< 50	480	490	< 250
TRH C10-C36 (Total)	50	mg/kg	< 50	1210	1010	< 250
Naphthalene[N02]	0.5	mg/kg	< 0.5	1.1	< 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	85	< 500	< 250
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	83.9	< 500	< 250
TRH >C16-C34	100	mg/kg	< 100	1000	830	< 500
TRH >C34-C40	100	mg/kg	< 100	520	620	< 500
TRH >C10-C40 (total)*	100	mg/kg	< 100	1605	1450	< 500
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	76	78	77	104

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
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
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

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
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	%	76	78	77	104
Toluene-d8 (surr.)	1	%	97	102	99	119
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	2.8	< 10	5.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	3.4	12	6.5	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	4.0	24	7.5	1.2
Acenaphthene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Acenaphthylene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Anthracene	0.5	mg/kg	1.6	< 10	2.6	< 0.5
Benz(a)anthracene	0.5	mg/kg	2.4	< 10	4.8	< 0.5
Benzo(a)pyrene	0.5	mg/kg	2.1	< 10	4.0	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 2	< 10	2.0	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	2.6	< 10	4.2	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	2.0	< 10	3.9	< 0.5
Chrysene	0.5	mg/kg	3.0	< 10	5.2	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 10	< 2	< 0.5
Fluoranthene	0.5	mg/kg	6.5	16	13	< 0.5
Fluorene	0.5	mg/kg	< 1	< 10	< 2	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	2.0	< 10	3.2	< 0.5
Naphthalene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Phenanthrene	0.5	mg/kg	5.7	18	11	< 0.5
Pyrene	0.5	mg/kg	7.0	16	13	< 0.5
Total PAH*	0.5	mg/kg	34.9	50	66.9	< 0.5
2-Fluorobiphenyl (surr.)	1	%	109	102	103	121
p-Terphenyl-d14 (surr.)	1	%	94	71	89	106
Semivolatile Organics						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	2.8	< 10	5.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	3.4	12	6.5	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	4.0	24	7.5	1.2
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 10	< 100	< 10	< 5
1-Chloronaphthalene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1-Naphthylamine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2.3-Trichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2.3.4-Tetrachlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2.3.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2.4-Trichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.2.4.5-Tetrachlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.3.5-Trichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2-Chloronaphthalene	0.5	mg/kg	< 1	< 10	< 1	< 0.5

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2-Chlorophenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2-Fluorobiphenyl (surr.)	1	%	109	102	103	121
2-Methylnaphthalene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 1	< 10	< 1	< 0.2
2-Naphthylamine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2-Nitroaniline	1	mg/kg	< 1	< 10	< 1	< 1
2-Nitrophenol	1	mg/kg	< 2	< 20	< 2	< 1
2-Picoline	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.3.4.6-Tetrachlorophenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.4-Dimethylphenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 10	< 100	< 10	< 5
2.4-Dinitrotoluene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 2	< 20	< 2	< 1
2.4.6-Tribromophenol (surr.)	1	%	INT	INT	INT	86
2.4.6-Trichlorophenol	1	mg/kg	< 2	< 20	< 2	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
2.6-Dinitrotoluene	1	mg/kg	< 1	< 10	< 1	< 1
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 2	< 20	< 2	< 0.4
3-Methylcholanthrene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
3.3'-Dichlorobenzidine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4-Aminobiphenyl	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4-Bromophenyl phenyl ether	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 2	< 20	< 2	< 1
4-Chlorophenyl phenyl ether	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4-Nitrophenol	5	mg/kg	< 10	< 100	< 10	< 5
4.4'-DDD	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4.4'-DDE	0.5	mg/kg	< 1	< 10	< 1	< 0.5
4.4'-DDT	1	mg/kg	< 1	< 10	< 1	< 1
7.12-Dimethylbenz(a)anthracene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
a-BHC	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Acenaphthene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Acenaphthylene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Acetophenone	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Aldrin	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Aniline	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Anthracene	0.5	mg/kg	1.6	< 10	2.6	< 0.5
b-BHC	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Benz(a)anthracene	0.5	mg/kg	2.4	< 10	4.8	< 0.5
Benzo(a)pyrene	0.5	mg/kg	2.1	< 10	4.0	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 2	< 10	2.0	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	2.6	< 10	4.2	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	2.0	< 10	3.9	< 0.5
Benzyl chloride	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Bis(2-chloroethoxy)methane	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Bis(2-chloroisopropyl)ether	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Bis(2-ethylhexyl)phthalate	5	mg/kg	< 5	< 10	< 5	< 5
Butyl benzyl phthalate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Chrysene	0.5	mg/kg	3.0	< 10	5.2	< 0.5

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
d-BHC	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Di-n-butyl phthalate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Di-n-octyl phthalate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 1	< 10	< 2	< 0.5
Dibenz(a.j)acridine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Dibenzofuran	0.5	mg/kg	< 1	< 10	< 2	< 0.5
Dieldrin	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Diethyl phthalate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Dimethyl phthalate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Dimethylaminoazobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Diphenylamine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endosulfan I	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endosulfan II	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endosulfan sulphate	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endrin	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endrin aldehyde	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Endrin ketone	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Fluoranthene	0.5	mg/kg	6.5	16	13	< 0.5
Fluorene	0.5	mg/kg	< 1	< 10	< 2	< 0.5
g-BHC (Lindane)	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Heptachlor	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Heptachlor epoxide	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Hexachlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Hexachlorobutadiene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Hexachlorocyclopentadiene	1	mg/kg	< 1	< 10	< 1	< 1
Hexachloroethane	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	2.0	< 10	3.2	< 0.5
Methoxychlor	0.5	mg/kg	< 1	< 10	< 1	< 0.5
N-Nitrosodibutylamine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
N-Nitrosodipropylamine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
N-Nitrosopiperidine	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Naphthalene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Nitrobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Nitrobenzene-d5 (surr.)	1	%	111	130	99	126
Pentachlorobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Pentachloronitrobenzene	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Pentachlorophenol	1	mg/kg	< 2	< 20	< 2	< 1
Phenanthrene	0.5	mg/kg	5.7	18	11	< 0.5
Phenol	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Phenol-d6 (surr.)	1	%	103	105	98	123
Pronamide	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Pyrene	0.5	mg/kg	7.0	16	13	< 0.5
Trifluralin	0.5	mg/kg	< 1	< 10	< 1	< 0.5
Chromium (hexavalent)	1	mg/kg	< 1	< 1	< 1	< 1
% Moisture	1	%	15	10	13	8.9

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.5	4.2	3.7	< 2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	67	20	17
Copper	5	mg/kg	63	65	65	64
Lead	5	mg/kg	79	81	85	32
Mercury	0.1	mg/kg	0.3	0.2	0.3	< 0.1
Nickel	5	mg/kg	19	22	25	16
Zinc	5	mg/kg	140	160	140	250
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	%	133	128	54	91
13C5-PFPeA (surr.)	1	%	148	143	68	97
13C5-PFHxA (surr.)	1	%	106	104	65	92
13C4-PFHpA (surr.)	1	%	126	124	66	97
13C8-PFOA (surr.)	1	%	131	135	69	93
13C5-PFNA (surr.)	1	%	138	142	71	85
13C6-PFDA (surr.)	1	%	139	144	84	105
13C2-PFUnDA (surr.)	1	%	106	109	88	108
13C2-PFDoDA (surr.)	1	%	110	108	91	110
13C2-PFTeDA (surr.)	1	%	140	107	92	117
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	%	123	107	69	79
D3-N-MeFOSA (surr.)	1	%	103	96	71	83
D5-N-EtFOSA (surr.)	1	%	112	104	76	98
D7-N-MeFOSE (surr.)	1	%	83	83	66	86
D9-N-EtFOSE (surr.)	1	%	57	63	66	70
D5-N-EtFOSAA (surr.)	1	%	102	93	112	180
D3-N-MeFOSAA (surr.)	1	%	107	93	103	168

Client Sample ID			BH215_0.4	BH217_0.4	DUP06_210701	SED250
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S21-Jl09041	S21-Jl09042	S21-Jl09043	S21-Jl09044
Date Sampled			Jul 05, 2021	Jul 05, 2021	Jul 05, 2021	Jul 05, 2021
Test/Reference	LOR	Unit				
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	103	69	92
18O2-PFHxS (surr.)	1	%	110	114	74	88
13C8-PFOS (surr.)	1	%	100	114	90	96
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 FTS (surr.)	1	%	INT	INT	70	85
13C2-6:2 FTSA (surr.)	1	%	160	INT	57	82
13C2-8:2 FTSA (surr.)	1	%	INT	INT	105	125
13C2-10:2 FTSA (surr.)	1	%	110	121	176	INT
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

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8	Sydney	Jul 07, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 07, 2021	14 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 07, 2021	28 Days
- Method: In-house method E057.2			
% Moisture	Sydney	Jul 06, 2021	14 Days
- Method: LTM-GEN-7080 Moisture			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Sydney	Jul 07, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Sydney	Jul 07, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Sydney	Jul 07, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Sydney	Jul 07, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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NSW 2300

Project Name: ADDITIONAL UNICORN

Order No.:
Report #: 808299
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 6, 2021 12:28 PM
Due: Jul 7, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - AS4964	Chromium (hexavalent)	Moisture Set	Eurofins Suite B7	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254											
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	
Brisbane Laboratory - NATA Site # 20794											X
Perth Laboratory - NATA Site # 23736											
Mayfield Laboratory - NATA Site # 25079											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	SS204_0.1	Jul 05, 2021		Soil	S21-Jl09037		X	X	X	X	X
2	SS205_0.1	Jul 05, 2021		Soil	S21-Jl09038		X	X	X	X	X
3	GW201_1.5	Jul 05, 2021		Soil	S21-Jl09039	X	X	X	X	X	X
4	GW201_3.0	Jul 05, 2021		Soil	S21-Jl09040	X	X	X	X	X	X
5	BH215_0.4	Jul 05, 2021		Soil	S21-Jl09041	X	X	X	X	X	X
6	BH217_0.4	Jul 05, 2021		Soil	S21-Jl09042	X	X	X	X	X	X
7	DUP06_210701	Jul 05, 2021		Soil	S21-Jl09043	X	X	X	X	X	X
8	SED250	Jul 05, 2021		Soil	S21-Jl09044		X	X	X	X	X
Test Counts						5	8	8	8	8	8

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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
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							
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							
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	< 1			1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	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-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	< 1			1	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	< 1			1	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	< 5			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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	< 1			1	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							
Chromium (hexavalent)	mg/kg	< 1			1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	ug/kg	< 5			5	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	ug/kg	< 5			5	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	ug/kg	< 5			5	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	ug/kg	< 5			5	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	ug/kg	< 5			5	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	ug/kg	< 10			10	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	ug/kg	< 10			10	Pass	
Method Blank							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	ug/kg	< 5			5	Pass	
Perfluorononanesulfonic acid (PFNS)	ug/kg	< 5			5	Pass	
Perfluoropropanesulfonic acid (PFPrS)	ug/kg	< 5			5	Pass	
Perfluoropentanesulfonic acid (PFPeS)	ug/kg	< 5			5	Pass	
Perfluorohexanesulfonic acid (PFHxS)	ug/kg	< 5			5	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	ug/kg	< 5			5	Pass	
Perfluorooctanesulfonic acid (PFOS)	ug/kg	< 5			5	Pass	
Perfluorodecanesulfonic acid (PFDS)	ug/kg	< 5			5	Pass	
Method Blank							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	ug/kg	< 10			10	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	ug/kg	< 5			5	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	ug/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	89			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
Naphthalene	%	98			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	78			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	117			70-130	Pass	
Toluene	%	107			70-130	Pass	
Ethylbenzene	%	101			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total*	%	105			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	113			70-130	Pass	
1.1.1-Trichloroethane	%	96			70-130	Pass	
1.2-Dichlorobenzene	%	98			70-130	Pass	
1.2-Dichloroethane	%	119			70-130	Pass	
Trichloroethene	%	101			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	111			70-130	Pass	
Pyrene	%	114			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	103			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.4-Dichlorobenzene	%	95			70-130	Pass	
2-Chlorophenol	%	102			30-130	Pass	
2.4-Dinitrotoluene	%	104			70-130	Pass	
4-Chloro-3-methylphenol	%	106			30-130	Pass	
4-Nitrophenol	%	110			30-130	Pass	
Acenaphthene	%	109			70-130	Pass	
N-Nitrosodipropylamine	%	110			70-130	Pass	
Pentachlorophenol	%	87			30-130	Pass	
Phenol	%	102			30-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	128			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	97			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	96			80-120	Pass	
Mercury	%	100			80-120	Pass	
Nickel	%	96			80-120	Pass	
Zinc	%	95			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	103			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	102			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	105			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	108			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	117			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	110			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	85			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	111			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	124			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	126			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	104			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	84			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	113			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	129			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	106			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	94			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	104			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	103			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	143			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	121			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	116			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	102			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	118			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	89			50-150	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)									
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)			%	86			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)			%	117			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)			%	115			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl09879	NCP	%	122			70-130	Pass	
TRH C10-C14	S21-Jl02291	NCP	%	95			70-130	Pass	
Naphthalene	S21-Jl09879	NCP	%	125			70-130	Pass	
TRH C6-C10	S21-Jl09879	NCP	%	122			70-130	Pass	
TRH >C10-C16	S21-Jl02291	NCP	%	88			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl09879	NCP	%	123			70-130	Pass	
Toluene	S21-Jl09879	NCP	%	121			70-130	Pass	
Ethylbenzene	S21-Jl09879	NCP	%	119			70-130	Pass	
m&p-Xylenes	S21-Jl09879	NCP	%	123			70-130	Pass	
o-Xylene	S21-Jl09879	NCP	%	121			70-130	Pass	
Xylenes - Total*	S21-Jl09879	NCP	%	122			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jl07116	NCP	%	110			70-130	Pass	
1.1.1-Trichloroethane	S21-Jl07116	NCP	%	90			70-130	Pass	
1.2-Dichlorobenzene	S21-Jl07116	NCP	%	92			70-130	Pass	
1.2-Dichloroethane	S21-Jl07116	NCP	%	105			70-130	Pass	
Trichloroethene	S21-Jl07116	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jl09020	NCP	%	97			75-125	Pass	
Cadmium	S21-Jl09879	NCP	%	78			75-125	Pass	
Chromium	S21-Jl09020	NCP	%	97			75-125	Pass	
Copper	S21-Jl09020	NCP	%	95			75-125	Pass	
Lead	S21-Jl09879	NCP	%	75			75-125	Pass	
Mercury	S21-Jl09879	NCP	%	75			75-125	Pass	
Nickel	S21-Jl09879	NCP	%	75			75-125	Pass	
Zinc	S21-Jl09879	NCP	%	75			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl09039	CP	%	104			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl09039	CP	%	108			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl09039	CP	%	122			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl09039	CP	%	114			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl09039	CP	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl09039	CP	%	113			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl09039	CP	%	129			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl09039	CP	%	87			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl09039	CP	%	115			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl09039	CP	%	122			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl09039	CP	%	125			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jl09039	CP	%	134			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl09039	CP	%	96			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl09039	CP	%	117			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl09039	CP	%	108			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl09039	CP	%	113			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl09039	CP	%	107			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl09039	CP	%	105			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl09039	CP	%	92			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl09039	CP	%	136			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl09039	CP	%	122			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl09039	CP	%	97			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl09039	CP	%	94			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl09039	CP	%	105			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl09039	CP	%	124			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl09039	CP	%	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)	S21-Jl09039	CP	%	112			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl09039	CP	%	108			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl09039	CP	%	85			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl09039	CP	%	112			50-150	Pass	
Spike - % Recovery									
Semivolatile Organics				Result 1					
1.2.4-Trichlorobenzene	S21-Jl09040	CP	%	100			70-130	Pass	
1.4-Dichlorobenzene	S21-Jl09040	CP	%	92			70-130	Pass	
2.4-Dinitrotoluene	S21-Jl09040	CP	%	120			70-130	Pass	
N-Nitrosodipropylamine	S21-Jl09040	CP	%	101			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	S21-Jl07030	NCP	mg/kg	< 1	< 1	<1	30%	Pass	

Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl09037	CP	ug/kg	< 10	< 10	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl09037	CP	ug/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl09037	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)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl09037	CP	ug/kg	< 10	< 10	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl09037	CP	ug/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	S21-Jl09039	CP	mg/kg	< 5	< 5	<1	30%	Pass	
1-Chloronaphthalene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1-Naphthylamine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4.5-Tetrachlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Chlorophenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl09039	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
2-Naphthylamine	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitroaniline	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Nitrophenol	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2-Picoline	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl09039	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl09039	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
4-Nitrophenol	S21-Jl09039	CP	mg/kg	< 5	< 5	<1	30%	Pass	
4.4'-DDD	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDE	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4.4'-DDT	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
a-BHC	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acetophenone	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aldrin	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aniline	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
b-BHC	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzyl chloride	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl09039	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
d-BHC	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenzofuran	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dieldrin	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diethyl phthalate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethyl phthalate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Diphenylamine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan I	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan II	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endosulfan sulphate	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin aldehyde	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Endrin ketone	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Heptachlor epoxide	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Hexachloroethane	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methoxychlor	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Nitrobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pentachlorophenol	S21-Jl09039	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Phenol	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pronamide	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trifluralin	S21-Jl09039	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl09040	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	S21-Jl09040	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S21-Jl09040	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S21-Jl09040	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	S21-Jl09040	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	S21-Jl09040	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S21-Jl09040	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	S21-Jl09040	CP	mg/kg	< 5	6.9	71	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl09041	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Naphthalene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S21-Jl09041	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl09041	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jl09041	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jl09041	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jl09041	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jl09041	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jl09041	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dibromoethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chlorotoluene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Allyl chloride	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromobenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromochloromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromodichloromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromoform	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Bromomethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon disulfide	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chlorobenzene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chloroform	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Chloromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromochloromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibromomethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Iodomethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Methylene Chloride	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Styrene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Tetrachloroethene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichloroethene	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Trichlorofluoromethane	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Vinyl chloride	S21-Jl09041	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C10-C14	S21-Jl09042	CP	mg/kg	< 200	< 200	<1	30%	Pass	
TRH C15-C28	S21-Jl09042	CP	mg/kg	730	660	10	30%	Pass	
TRH C29-C36	S21-Jl09042	CP	mg/kg	480	600	23	30%	Pass	
TRH >C10-C16	S21-Jl09042	CP	mg/kg	85	60	33	30%	Fail	Q15
TRH >C16-C34	S21-Jl09042	CP	mg/kg	1000	1000	2.0	30%	Pass	
TRH >C34-C40	S21-Jl09042	CP	mg/kg	520	810	43	30%	Fail	Q02
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S21-Jl09042	CP	%	10	9.6	5.0	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
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).
Q02	The duplicate %RPD is outside the recommended acceptance criteria. Further analysis indicates sample heterogeneity as the cause
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
Andrew Sullivan	Senior Analyst-Organic (NSW)
Andrew Sullivan	Senior Analyst-PFAS (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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RE: For checking FW: Eurofins Sample Receipt Advice - Report 808240 : Site MASCOT DSI (UNICORN)

Jack Emblen <Jack.Emblen@erm.com>

Wed 7/7/2021 12:56 PM

To: Elvis Dsouza <ElvisDsouza@eurofins.com>
Cc: Michael Mercer <Michael.Mercer@erm.com>; Ian Batterley <Ian.Batterley@erm.com>; #AU04_Enviro_Sample_NSW <EnviroSampleNSW@eurofins.com>

3 attachments (1 MB)
808240_COC.pdf; 808240_sample_receipt_coc.pdf; 808240_summary.pdf;

EXTERNAL EMAIL*

Hi Elvis,

Can I please get sample GW201 taken off hold and placed on the same analysis as sample GW206? Thanks in advance.

Kind Regards,

Jack Emblen
Environmental Consultant

ERM
Unit 11 ¦277 Lane Cove Road¦ Macquarie Park NSW 2113
E jack.emblen@erm.com ¦ W www.erm.com



The business of sustainability

From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Wednesday, July 7, 2021 12:45 PM
To: Jack Emblen <Jack.Emblen@erm.com>
Cc: Michael Mercer <Michael.Mercer@erm.com>
Subject: For checking FW: Eurofins Sample Receipt Advice - Report 808240 : Site MASCOT DSI (UNICORN)

From: EnviroSampleNSW@eurofins.com <EnviroSampleNSW@eurofins.com>
Sent: Wednesday, July 7, 2021 9:14 AM
To: Ian Batterley <Ian.Batterley@erm.com>
Subject: Eurofins Sample Receipt Advice - Report 808240 : Site MASCOT DSI (UNICORN)

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,

Received sample GW201 not on COC, logged on hold.

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

Regards

Truong Nguyen
Sample Receipt

Eurofins | Environmental Testing
Unit F3, Parkview Building
16 Mars Road
LANE COVE WEST NSW 2066
AUSTRALIA
Phone: +61 02 9900 8421
Email: EnviroSampleNSW@eurofins.com
Website:[http://]environment.eurofins.com.au

EnviroNote 1108 - Emissions from Stationary Sources
EnviroNote 1103 - NATA Accreditation for Dioxins
EnviroNote 1114 - Eurofins Mould Testing Laboratory is now NATA accredited
EnviroNote 1115 - Eurofins SYDNEY Laboratory is now NATA accredited for PFAS

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eurofins | Environment Testing

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

Sample Receipt Advice

Company name:	ERM Hunter Valley
Contact name:	Ian Batterley
Project name:	ADDITIONAL - MASCOT DSI
Project ID:	UNICORN
Turnaround time:	1 Day
Date/Time received	Jul 7, 2021 12:55 PM
Eurofins reference	808570

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 2 degrees Celsius.
✓	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:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@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 Hunter Valley email address.

eurofins | Environment Testing

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

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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: ADDITIONAL - MASCOT DSI
Project ID: UNICORN

Order No.:
Report #: 808570
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 7, 2021 12:55 PM
Due: Jul 8, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Chromium (hexavalent)	Eurofins Suite B7 (filtered metals)	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254									
Sydney Laboratory - NATA Site # 18217						X	X	X	
Brisbane Laboratory - NATA Site # 20794									X
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory - NATA Site # 25079									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	GW201	Jul 05, 2021		Water	S21-Jl11309	X	X	X	X
Test Counts						1	1	1	1

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
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Attention: **Ian Batterley**

Report **808570-W-V2**
Project name ADDITIONAL - MASCOT DSI
Project ID UNICORN
Received Date Jul 07, 2021

Client Sample ID			**GW201**
Sample Matrix			**Water**
Eurofins Sample No.			**S21-Jl11309**
Date Sampled			**Jul 05, 2021**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
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
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	0.2
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.2
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	%	90
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

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
Test/Reference	LOR	Unit	
Volatile Organics			
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	%	90
Toluene-d8 (surr.)	1	%	79

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
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	%	61
p-Terphenyl-d14 (surr.)	1	%	73
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-Fluorobiphenyl (surr.)	1	%	61
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-Tribromophenol (surr.)	1	%	69
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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
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

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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	0.005	mg/L	< 0.005
Nitrobenzene-d5 (surr.)	1	%	113
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
Phenol-d6 (surr.)	1	%	INT
Pronamide	0.005	mg/L	< 0.005
Pyrene	0.001	mg/L	< 0.001
Trifluralin	0.005	mg/L	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005
Heavy Metals			
Arsenic (filtered)	0.001	mg/L	0.002
Cadmium (filtered)	0.0002	mg/L	< 0.0002
Chromium (filtered)	0.001	mg/L	0.002
Copper (filtered)	0.001	mg/L	< 0.001
Lead (filtered)	0.001	mg/L	0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001
Zinc (filtered)	0.005	mg/L	0.012
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	[G10]< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.10
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.23
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	[N09]0.05
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	[N09]0.27
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	1.1
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

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	62
13C5-PFPeA (surr.)	1	%	105
13C5-PFHxA (surr.)	1	%	119
13C4-PFHpA (surr.)	1	%	143
13C8-PFOA (surr.)	1	%	107
13C5-PFNA (surr.)	1	%	86
13C6-PFDA (surr.)	1	%	47
13C2-PFUnDA (surr.)	1	%	75
13C2-PFDoDA (surr.)	1	%	89
13C2-PFTeDA (surr.)	1	%	80
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	%	71
D3-N-MeFOSA (surr.)	1	%	50
D5-N-EtFOSA (surr.)	1	%	52
D7-N-MeFOSE (surr.)	1	%	43
D9-N-EtFOSE (surr.)	1	%	43
D5-N-EtFOSAA (surr.)	1	%	59
D3-N-MeFOSAA (surr.)	1	%	60
Perfluoroalkyl sulfonic acids (PFSAs)			
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.05
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	[N09]0.08
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	[N09]1.8
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	[N09]0.34
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	[N09]19
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01
13C3-PFBS (surr.)	1	%	127
18O2-PFHxS (surr.)	1	%	108
13C8-PFOS (surr.)	1	%	79
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

Client Sample ID			GW201
Sample Matrix			Water
Eurofins Sample No.			S21-Jl11309
Date Sampled			Jul 05, 2021
Test/Reference	LOR	Unit	
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
13C2-4:2 FTS (surr.)	1	%	74
13C2-6:2 FTSA (surr.)	1	%	62
13C2-8:2 FTSA (surr.)	1	%	52
13C2-10:2 FTSA (surr.)	1	%	58
PFASs Summations			
Sum (PFHxS + PFOS)*	0.01	ug/L	20.8
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	19.27
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	21.07
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	21.5
Sum of PFASs (n=30)*	0.1	ug/L	23.02

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 07, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Jul 07, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 07, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 07, 2021	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 07, 2021	28 Days
- Method: In-house method E057.1			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Brisbane	Jul 09, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Brisbane	Jul 08, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Brisbane	Jul 08, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Brisbane	Jul 09, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Address: Level 1 / 45 Watt Street
Newcastle
NSW 2300

Project Name: ADDITIONAL - MASCOT DSI
Project ID: UNICORN

Order No.:
Report #: 808570
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 7, 2021 12:55 PM
Due: Jul 8, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Chromium (hexavalent)	Eurofins Suite B7 (filtered metals)	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)
Melbourne Laboratory - NATA Site # 1254									
Sydney Laboratory - NATA Site # 18217						X	X	X	
Brisbane Laboratory - NATA Site # 20794									X
Perth Laboratory - NATA Site # 23736									
Mayfield Laboratory - NATA Site # 25079									
External Laboratory									
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**				
1	GW201	Jul 05, 2021		Water	S21-Jl11309	X	X	X	X
Test Counts						1	1	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples 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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.005			0.005	Pass	
1.2-Dichlorobenzene	mg/L	< 0.005			0.005	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	< 0.005			0.005	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005			0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Naphthylamine	mg/L	< 0.005			0.005	Pass	
2-Nitroaniline	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	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	
2.6-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005			0.005	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005			0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
4.4'-DDD	mg/L	< 0.005			0.005	Pass	
4.4'-DDE	mg/L	< 0.005			0.005	Pass	
4.4'-DDT	mg/L	< 0.005			0.005	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.005			0.005	Pass	
a-BHC	mg/L	< 0.005			0.005	Pass	
Acetophenone	mg/L	< 0.005			0.005	Pass	
Aldrin	mg/L	< 0.005			0.005	Pass	
Aniline	mg/L	< 0.005			0.005	Pass	
b-BHC	mg/L	< 0.005			0.005	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005			0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005			0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005			0.005	Pass	
d-BHC	mg/L	< 0.005			0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005			0.005	Pass	
Di-n-octyl phthalate	mg/L	< 0.005			0.005	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.005			0.005	Pass	
Dieldrin	mg/L	< 0.005			0.005	Pass	
Diethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005			0.005	Pass	
Diphenylamine	mg/L	< 0.005			0.005	Pass	
Endosulfan I	mg/L	< 0.005			0.005	Pass	
Endosulfan II	mg/L	< 0.005			0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005			0.005	Pass	
Endrin	mg/L	< 0.005			0.005	Pass	
Endrin aldehyde	mg/L	< 0.005			0.005	Pass	
Endrin ketone	mg/L	< 0.005			0.005	Pass	
g-BHC (Lindane)	mg/L	< 0.005			0.005	Pass	
Heptachlor	mg/L	< 0.005			0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005			0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005			0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorocyclopentadiene	mg/L	< 0.005			0.005	Pass	
Hexachloroethane	mg/L	< 0.005			0.005	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005			0.005	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.005			0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Chromium (hexavalent)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
TRH C6-C9	%	109			70-130	Pass	
TRH C10-C14	%	115			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
TRH C6-C10	%	110			70-130	Pass	
TRH >C10-C16	%	116			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	118			70-130	Pass	
Toluene	%	101			70-130	Pass	
Ethylbenzene	%	115			70-130	Pass	
m&p-Xylenes	%	115			70-130	Pass	
o-Xylene	%	107			70-130	Pass	
Xylenes - Total*	%	121			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	115			70-130	Pass	
1.1.1-Trichloroethane	%	117			70-130	Pass	
1.2-Dichlorobenzene	%	102			70-130	Pass	
1.2-Dichloroethane	%	118			70-130	Pass	
Trichloroethene	%	98			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	83			70-130	Pass	
Pyrene	%	81			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
1.2.4-Trichlorobenzene	%	109			70-130	Pass	
1.3.5-Trichlorobenzene	%	109			70-130	Pass	
1.4-Dichlorobenzene	%	91			70-130	Pass	
2-Chlorophenol	%	49			30-130	Pass	
2.4-Dinitrotoluene	%	89			70-130	Pass	
4-Chloro-3-methylphenol	%	49			30-130	Pass	
N-Nitrosodipropylamine	%	81			70-130	Pass	
Pentachlorophenol	%	57			30-130	Pass	
Phenol	%	77			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	103			70-130	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	105			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	100			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	92			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	102			50-150	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluorooctanoic acid (PFOA)	%	91			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	88			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	93			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	93			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	99			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	101			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	102			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	97			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	88			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	91			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	%	91			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	%	95			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	100			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	70			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	68			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	69			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	77			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	68			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	88			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	%	84			50-150	Pass	
LCS - % Recovery							
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)							
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	91			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	%	84			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	%	89			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl06801	NCP	%	94			70-130	Pass	
Naphthalene	S21-Jl12012	NCP	%	82			70-130	Pass	
TRH C6-C10	S21-Jl06801	NCP	%	94			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl12012	NCP	%	118			70-130	Pass	
Toluene	S21-Jl12012	NCP	%	105			70-130	Pass	
Ethylbenzene	S21-Jl12012	NCP	%	117			70-130	Pass	
m&p-Xylenes	S21-Jl06801	NCP	%	90			70-130	Pass	
o-Xylene	S21-Jl06801	NCP	%	89			70-130	Pass	
Xylenes - Total*	S21-Jl06801	NCP	%	90			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jl12012	NCP	%	107			70-130	Pass	
1.1.1-Trichloroethane	S21-Jl12012	NCP	%	110			70-130	Pass	
1.2-Dichlorobenzene	S21-Jl12012	NCP	%	90			70-130	Pass	
1.2-Dichloroethane	S21-Jl12012	NCP	%	120			70-130	Pass	
Trichloroethene	S21-Jl12012	NCP	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Jl11309	CP	%	82			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Jl12071	NCP	%	106			75-125	Pass	
Cadmium (filtered)	S21-Jl12071	NCP	%	100			75-125	Pass	
Chromium (filtered)	S21-Jl12071	NCP	%	91			75-125	Pass	
Copper (filtered)	S21-Jl12071	NCP	%	86			75-125	Pass	
Lead (filtered)	S21-Jl12071	NCP	%	89			75-125	Pass	
Mercury (filtered)	S21-Jl12071	NCP	%	101			75-125	Pass	
Nickel (filtered)	S21-Jl12071	NCP	%	87			75-125	Pass	
Zinc (filtered)	S21-Jl12071	NCP	%	89			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl10145	NCP	%	97			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl10145	NCP	%	90			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl10145	NCP	%	86			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl10145	NCP	%	94			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl10145	NCP	%	95			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl10145	NCP	%	89			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl10145	NCP	%	99			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl10145	NCP	%	84			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl10145	NCP	%	91			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl10145	NCP	%	71			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl10145	NCP	%	96			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jl10145	NCP	%	84			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl10145	NCP	%	78			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl10145	NCP	%	63			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl10145	NCP	%	89			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl10145	NCP	%	98			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl10145	NCP	%	96			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl10145	NCP	%	89			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl10145	NCP	%	84			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl10145	NCP	%	81			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl10145	NCP	%	103			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl10145	NCP	%	96			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl10145	NCP	%	93			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl10145	NCP	%	68			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl10145	NCP	%	91			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl10145	NCP	%	62			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S21-Jl10145	NCP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl10145	NCP	%	78			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl10145	NCP	%	90			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl10145	NCP	%	68			50-150	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl12013	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Naphthalene	S21-Jl12013	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Jl12013	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Jl12013	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Jl12013	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
Bromobenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S21-Jl12013	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S21-Jl12013	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	S21-Jl07110	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
2-Methyl-4.6-dinitrophenol	S21-Jl07110	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
1-Chloronaphthalene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1-Naphthylamine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3-Trichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.4-Tetrachlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.3.5-Tetrachlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.2.4-Trichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
1.2.4.5-Tetrachlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.3.5-Trichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chloronaphthalene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Chlorophenol	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Methylnaphthalene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Methylphenol (o-Cresol)	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2-Naphthylamine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitroaniline	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2-Nitrophenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2-Picoline	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.3.4.6-Tetrachlorophenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dichlorophenol	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dimethylphenol	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	S21-Jl07110	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2.4-Dinitrotoluene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
2.4.5-Trichlorophenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.6-Dinitrotoluene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	S21-Jl07110	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
3-Methylcholanthrene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
3.3'-Dichlorobenzidine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Aminobiphenyl	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Bromophenyl phenyl ether	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Chloro-3-methylphenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
4-Chlorophenyl phenyl ether	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4-Nitrophenol	S21-Jl07110	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
4.4'-DDD	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDE	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
4.4'-DDT	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
7.12-Dimethylbenz(a)anthracene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
a-BHC	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Acetophenone	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aldrin	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aniline	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
b-BHC	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Benzyl chloride	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroethoxy)methane	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-chloroisopropyl)ether	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Bis(2-ethylhexyl)phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Butyl benzyl phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
d-BHC	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-butyl phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Di-n-octyl phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenz(a.j)acridine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dibenzofuran	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dieldrin	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diethyl phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethyl phthalate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Dimethylaminoazobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Diphenylamine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan I	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

Duplicate									
Semivolatile Organics				Result 1	Result 2	RPD			
Endosulfan II	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endosulfan sulphate	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin aldehyde	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Endrin ketone	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
g-BHC (Lindane)	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Heptachlor epoxide	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorobutadiene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachlorocyclopentadiene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Hexachloroethane	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Methoxychlor	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodibutylamine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosodipropylamine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
N-Nitrosopiperidine	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Nitrobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachloronitrobenzene	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Pentachlorophenol	S21-Jl07110	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Phenol	S21-Jl07110	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Pronamide	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Trifluralin	S21-Jl07110	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Jl11820	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium (filtered)	S21-Jl11820	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Jl11820	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper (filtered)	S21-Jl11820	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S21-Jl11820	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S21-Jl11820	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Jl11820	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S21-Jl11820	NCP	mg/L	0.006	< 0.005	25	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanoic acid (PFHxA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanoic acid (PFOA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanoic acid (PFNA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanoic acid (PFDA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	B21-Jl13398	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)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	B21-Jl13398	NCP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	B21-Jl13398	NCP	ug/L	< 0.01	< 0.01	<1	30%	Pass	

Comments

V2- new version with repeated PFAS on the sample as per client request.

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
G10	The LOR has been raised due to suspected contamination
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).

Authorised by:

Andrew Black	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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Grace Tuckwell

From: #AU04_Enviro_Sample_NSW
Subject: FW: 1 DAY TAT ADDITIONAL ANALYSIS: FW: ACM results

Importance: High

From: Michael Mercer <Michael.Mercer@erm.com>
Sent: Wednesday, 14 July 2021 10:41 AM
To: Andrew Black <AndrewBlack@eurofins.com>; Ian Batterley <Ian.Batterley@erm.com>; Charl Du Preez <CharlDuPreez@eurofins.com>
Subject: RE: ACM results

EXTERNAL EMAIL*

Hey Andrew,

See below

BH208_0.3	5/07/2021	808027
GW207_0.6	28/06/2021	807316
GW223_3.0	30/06/2021	807316
GW233_2.5	29/06/2021	807316
GW233_4.0	29/06/2021	807316
GW235_3.0	29/06/2021	807316
SED249	5/07/202	808027
SP237_0.7	22/06/2021	806169
TP202_0.3	28/06/2021	807316
TP214_1.2	22/06/2021	806169

Please **disregard** SP237_ACM

Thanks

From: Andrew Black <AndrewBlack@eurofins.com>
Sent: Wednesday, July 14, 2021 10:32 AM
To: Michael Mercer <Michael.Mercer@erm.com>; Ian Batterley <Ian.Batterley@erm.com>; Charl Du Preez <charldupreez@eurofins.com>
Subject: RE: ACM results

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Thanks Mick

Can you please provide our report number or numbers that these ones are from?

Andrew Black
Analytical Services Manager

Eurofins | Environment Testing
Unit 7
7 Friesian Close
SANDGATE, NSW, 2304
AUSTRALIA
Phone: +61 2 9900 8490
Mobile: +61 410 220 750

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For despatch enquiries (eg. courier bookings, bottle orders) please contact AU04_Despatch_SYD@eurofins.com or 0488 400 929 (8am – 4pm).

Email: AndrewBlack@eurofins.com
Website: eurofins.com.au/environmental-testing

From: Michael Mercer <Michael.Mercer@erm.com>
Sent: Wednesday, 14 July 2021 10:31 AM
To: Ian Batterley <Ian.Batterley@erm.com>; Charl Du Preez <CharlDuPreez@eurofins.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: ACM results

EXTERNAL EMAIL*

Hi Charl,

Please analyse the below for the NEPM "WA DoH" on a 24 hr TAT;

TP12_1.2
SP237_0.7
SP237_ACM
BH208_0.3
SED249
GW207_0.6
TP202_0.3
GW233_2.5
GW233_4.0
GW235_3.0
GW233_3.0

Thanks
Michael

From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Wednesday, July 14, 2021 10:23 AM
To: Charl Du Preez <charldupreez@eurofins.com>; Michael Mercer <Michael.Mercer@erm.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: Re: ACM results

Will do, thanks!

Get Outlook for iOS

From: Charl Du Preez <CharlDuPreez@eurofins.com>
Sent: Wednesday, July 14, 2021 10:22:02 AM
To: Ian Batterley <Ian.Batterley@erm.com>; Michael Mercer <Michael.Mercer@erm.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: ACM results

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No problem at all, let me know if you need me to support in any way

Charl du Preez

From: Ian Batterley <Ian.Batterley@erm.com>
Sent: Wednesday, 14 July 2021 10:20 AM
To: Charl Du Preez <CharlDuPreez@eurofins.com>; Michael Mercer <Michael.Mercer@erm.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: Re: ACM results

EXTERNAL EMAIL*

Hey mate - that' s all good.

We will go through results and get some additional analysis on select samples

Thanks Charl

Much appreciated

Get Outlook for iOS

From: Charl Du Preez <CharlDuPreez@eurofins.com>
Sent: Wednesday, July 14, 2021 10:16:23 AM
To: Ian Batterley <Ian.Batterley@erm.com>; Michael Mercer <Michael.Mercer@erm.com>
Cc: Andrew Black <AndrewBlack@eurofins.com>
Subject: FW: ACM results

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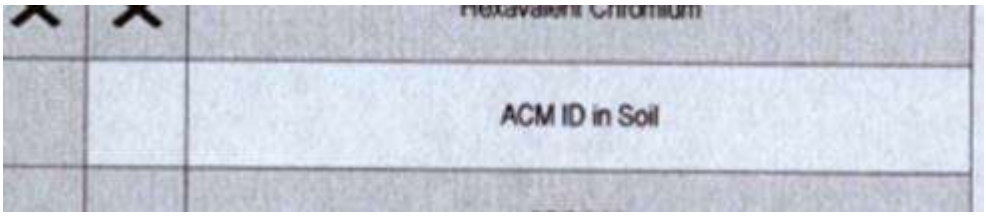
Hi Ian and Michael

Looks like the quote and COC reflected AS4964

Did you want me to re-analyse as NEPM "WA DoH" analysis?

SOIL ANALYSIS FEES

Suite Code[1]	Soil	Sample Number	Standard 5 Day TAT		Urgent 2 Day TAT		Urgent 3 Da
			Price / Sample	Line Total	Price / Sample	Line Total	Price / Sample
	Asbestos Identification in Soil (AS 4964) - Quantitative (0.01% w/w)	105	$ 20.40	$ 2,142.00	$ 25.50	$ 2,677.50	$ 22.44
	Total Recoverable Hydrocarbons (TRH)	105	$ 20.50	$ 2,152.50	$ 25.63	$ 2,690.63	$ 22.55



Charl du Preez

From: Matthew Deaves <MatthewDeaves@eurofins.com>
Sent: Tuesday, 13 July 2021 6:14 PM
To: Michael Mercer <Michael.Mercer@erm.com>
Cc: Charl Du Preez <CharlDuPreez@eurofins.com>; Andrew Black <AndrewBlack@eurofins.com>; Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: ACM results

Hi Michael
I see what's happened. Quote and CoC are for AS:4964 "Asbestos ID" analysis, not NEPM "WA DoH" analysis. Easily solved with reanalysis – Charl will be in touch in the morning.

Matt Deaves
State Manager, WA

Eurofins | Environment Testing AU/NZ
NEW Welshpool Address
Phone: +61 (0)8 6253 4444
Mobile: +61 (0)4 2816 8083
Eurofins acquires ARL Group

From: Michael Mercer <Michael.Mercer@erm.com>
Sent: Tuesday, 13 July 2021 14:53
To: Matthew Deaves <MatthewDeaves@eurofins.com>
Cc: Charl Du Preez <CharlDuPreez@eurofins.com>; Andrew Black <AndrewBlack@eurofins.com>; Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: ACM results

EXTERNAL EMAIL*

Hi Matt,

Thanks for getting back to me.

The project was UNICORN

I can understand with regards to the friability assessment. I also understand the field observations/ lab descriptions regarding the state of the fragment (weathered etc).

My question is solely based on this determination if the ACM recorded is friable/ <7mm so we can screen the results against the appropriate screening criteria.

I think what has happened, is we did not get quantitative analysis performed on our samples (although it was requested in the lab quote). So therefore the breakdown of the sizes of the ACM in the samples were not provided. I think all we can do now, is look at the observations made by the lab, and if there is any reference to weathering etc, we will assume it is all friable.

Thanks
Mick

From: Matthew Deaves <MatthewDeaves@eurofins.com>
Sent: Tuesday, July 13, 2021 4:29 PM
To: Michael Mercer <Michael.Mercer@erm.com>
Cc: Charl Du Preez <charldupreez@eurofins.com>; Andrew Black <AndrewBlack@eurofins.com>
Subject: RE: ACM results

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Hi Michael

Strictly speaking the assessment of friability is an in-field determination based on observations. Labs are not permitted to perform friability assessment.

That said, anything meeting the criteria for either Fibrous Asbestos (ACM type that is prescribed as Friable (e.g. rope, lagging) or exhibiting high degree of degradation/weathering) or Asbestos Fines (i.e. size is <7mm) is notionally treated as "friable" per the worksafe definitions and informs a risk assessment as such. That risk assessment draws heavily on the site observations and findings and is complemented by the confirmatory lab analysis.

The Total Estimated Content reflects everything in the bag and is not further broken down unless testing for AF/FA is scheduled and there are detects in the fractions that meet those size/morphology criteria above.

Can you share the original lab report with me so I can take a look at the raw data for you?

Regards

Matt Deaves
State Manager, WA

Eurofins | Environment Testing AU/NZ
NEW Welshpool Address
Phone: +61 (0)8 6253 4444
Mobile: +61 (0)4 2816 8083

Eurofins acquires ARL Group

From: Michael Mercer <Michael.Mercer@erm.com>
Sent: Tuesday, 13 July 2021 4:02 PM
To: Andrew Black <AndrewBlack@eurofins.com>
Cc: Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: ACM results

EXTERNAL EMAIL*

Hi Andrew,

I know the screening criteria, as per my initial email. The screening criteria of 0.01% w/w is for a residential setting, not a commercial/ industrial (HIL D). Anyway..
My query is associated with the lab results 'total estimated asbestos concentration' (% w/w) – is it friable or is it bonded? If it's both, how are we supposed to tell if it exceeds the friable screening criteria?

Thanks

From: Andrew Black <AndrewBlack@eurofins.com>
Sent: Tuesday, July 13, 2021 3:55 PM
To: Michael Mercer <Michael.Mercer@erm.com>
Cc: Ian Batterley <Ian.Batterley@erm.com>
Subject: RE: ACM results

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Hi Michael

The team have been able to provide for you:

according to NEPM guidelines:

Bonded is 0.01% w/w.

4.7 Basis for health screening levels for asbestos in soil

In 2009, the Western Australian Department of Health (WA DoH) released *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (WA DoH 2009). The WA DoH guidelines are based on research published by Swartjes & Tromp (2008), which is based on an extensive database of field and simulation trials using both bound and friable asbestos. The trial results indicated that a soil level of 0.01% for friable asbestos should keep asbestos fibre levels in air below 0.001 fibres per millilitre (f/ml) and probably to around 0.0001 f/ml. This corresponds to a lifetime risk of 10^{-6} to 10^{-5} in the exposed population from airborne asbestos fibres using WHO (2005) risk figures for mesothelioma (WA DoH 2009). The Netherlands (Swartjes & Tromp 2008) apply an investigation level of 0.01% weight for weight (w/w) for fibrous asbestos and 0.1% w/w asbestos for non-friable asbestos (i.e. bound asbestos in sound condition) in soil.

WA DoH has taken a more conservative approach (by a factor of 10) than the Netherlands to take account of the greater dryness and dust-generating potential of many local soils and the practice of treating all forms of asbestos (e.g. crocidolite, amosite, chrysotile and actinolite) as equivalent in terms of human health risk. The WA guidelines apply screening levels of:

- 0.01% w/w asbestos in soil for ACM (being asbestos in bonded ACM) to residential sites equivalent to land use setting HIL A. Additional criteria are provided for other land uses based on the default exposure ratios of the NEPM (1999)
- 0.001% w/w asbestos in soil for FA and AF for all site uses.

Many thanks

Andrew Black
Analytical Services Manager

Eurofins | Environment Testing
Unit 7
7 Friesian Close
SANDGATE, NSW, 2304
AUSTRALIA

Phone: +61 2 9900 8490
Mobile: +61 410 220 750

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For despatch enquiries (eg. courier bookings, bottle orders) please contact AU04_Despatch_SYD@eurofins.com or 0488 400 929 (8am – 4pm).

Email: AndrewBlack@eurofins.com
Website: eurofins.com.au/environmental-testing

From: Michael Mercer <Michael.Mercer@erm.com>
Sent: Monday, 12 July 2021 6:35 PM
To: Andrew Black <AndrewBlack@eurofins.com>
Cc: Ian Batterley <Ian.Batterley@erm.com>
Subject: ACM results

EXTERNAL EMAIL*

Hi mate,

Quick one, but also very important.
Want to be 100% clear on our interpretation of ACM results.

I'm trying to screen against HSL D;
- friable is 0.001 % w/w
- bonded is 0.05 % w/w

My understanding is the 'Total estimated asbestos concentration' results below are all FA/ AF? I assume the bonded element, has to come from the field when we bulk sample and sieve in field.
Am I correct.

	Result
men	Chrysotile asbestos detected in fibre cement fragments. Chrysotile and amosite asbestos detected in weathered fibre plaster material Approximate raw weight of asbestos containing material = 0.22g* Total estimated asbestos content in the sample = 0.045g* Total estimated asbestos concentration = 0.0082% w/w* No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
ed	Chrysotile asbestos detected in fibro-bituminous material. Approximate raw weight of asbestos containing material = 2.2g Total estimated asbestos content in the sample = 0.11g* Total estimated asbestos concentration = 0.017% w/w* Organic fibre detected. No trace asbestos detected.

Cheers mate,

Michael Mercer
Environmental Consultant

ERM
Level 1, 45 Watt Street | Newcastle | NSW 2300
T +61 2 4903 5500 | **M** +61 439 623 103

E michael.mercer@erm.com | **W** www.erm.com



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Rolleston, Christchurch 7675
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IANZ # 1290

Sample Receipt Advice

Company name:	ERM Hunter Valley
Contact name:	Ian Batterley
Project name:	ADDITIONAL UNICORN
Project ID:	Not provided
Turnaround time:	1 Day
Date/Time received	Jul 14, 2021 10:41 AM
Eurofins reference	810418

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.
N/A	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@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 Hunter Valley email address.

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IANZ # 1290

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

Project Name: ADDITIONAL UNICORN

Order No.:
Report #: 810418
Phone: (02) 4964 2150
Fax: (02) 4964 2152

Received: Jul 14, 2021 10:41 AM
Due: Jul 15, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Andrew Black

Sample Detail						Asbestos - WA guidelines
Melbourne Laboratory - NATA Site # 1254						
Sydney Laboratory - NATA Site # 18217						X
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Mayfield Laboratory - NATA Site # 25079						
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
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4	TP202_0.3	Jun 28, 2021		Soil	S21-Jl25389	X
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6	GW233_4.0	Jun 29, 2021		Soil	S21-Jl25391	X
7	GW235_3.0	Jun 29, 2021		Soil	S21-Jl25392	X
8	SP237_0.7	Jun 22, 2021		Soil	S21-Jl25393	X
9	TP214_1.2	Jun 22, 2021		Soil	S21-Jl25394	X
10	GW223_3.0	Jun 30, 2021		Soil	S21-Jl25430	X

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External Laboratory	
Test Counts	10

Certificate of Analysis

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

Attention:	Ian Batterley
Report	810418-AID
Project Name	ADDITIONAL UNICORN
Received Date	Jul 14, 2021
Date Reported	Jul 15, 2021

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.*

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Project Name ADDITIONAL UNICORN
Project ID
Date Sampled Jun 22, 2021 to Jul 05, 2021
Report 810418-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
BH208_0.3	21-JI25386	Jul 05, 2021	Approximate Sample 550 Sample consisted of: Dark brown coarse-grained sandy soil, bitumen and rocks	FA: Chrysotile and amosite asbestos detected in weathered fibre plaster-cement like material. Approximate raw weight of FA = 0.22g Estimated asbestos content in FA = 0.045g* Total estimated asbestos concentration in FA = 0.0082% w/w* Organic fibre detected. No trace asbestos detected.
SED249	21-JI25387	Jul 05, 2021	Approximate Sample 543g Sample consisted of: Dark brown coarse-grained sandy soil, glass fragments, cement and rocks	AF: Amosite asbestos detected in the form of loose fibre bundles. Approximate raw weight of AF = 0.00010g* Estimated asbestos content in AF = 0.00010g* Total estimated asbestos concentration in AF = 0.000018% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
GW207_0.6	21-JI25388	Jun 28, 2021	Approximate Sample 718g Sample consisted of: Dark brown coarse-grained sandy soil and rocks	FA: Chrysotile, amosite and crocidolite asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.58g Estimated asbestos content in FA = 0.17g* Total estimated asbestos concentration in FA = 0.024% w/w* Organic fibre detected. No trace asbestos detected.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP202_0.3	21-JI25389	Jun 28, 2021	Approximate Sample 586g Sample consisted of: Dark brown coarse-grained sandy soil and rocks	AF: Chrysotile asbestos detected in fibrous bituminous material. Approximate raw weight of AF = 0.011g Estimated asbestos content in AF = 0.00057g* Total estimated asbestos concentration in AF = 0.000097% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No respirable fibres detected.
GW233_2.5	21-JI25390	Jun 29, 2021	Approximate Sample 377g Sample consisted of: Dark brown coarse-grained sandy soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.43g Estimated asbestos content in FA = 0.13g* Total estimated asbestos concentration in FA = 0.034% w/w* Organic fibre detected. No trace asbestos detected.
GW233_4.0	21-JI25391	Jun 29, 2021	Approximate Sample 637 Sample consisted of: Dark brown coarse-grained sandy soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.10g Estimated asbestos content in FA = 0.021g* Total estimated asbestos concentration in FA = 0.0033% w/w* Organic fibre detected. No trace asbestos detected.
GW235_3.0	21-JI25392	Jun 29, 2021	Approximate Sample 580g Sample consisted of: Dark brown coarse-grained sandy soil, bitumen and rocks	ACM: Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 8.7g Total estimated asbestos content in ACM = 0.87g* Total estimated asbestos concentration in ACM = 0.15% w/w* Organic fibre detected. No trace asbestos detected.
SP237_0.7	21-JI25393	Jun 22, 2021	Approximate Sample 621g Sample consisted of: Brown coarse-grained sandy soil, glass fragments, cement and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.021g Estimated asbestos content in FA = 0.0021g* Total estimated asbestos concentration in FA = 0.00034% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP214_1.2	21-JI25394	Jun 22, 2021	Approximate Sample 622 Sample consisted of: Brown coarse-grained sandy soil, compressed fibrous materialand rocks	ACM: Chrysotile asbestos detected in fibrous bituminous material. Approximate raw weight of ACM = 2.2g Total estimated asbestos content in ACM = 0.11g* Total estimated asbestos concentration in ACM = 0.017% w/w* Organic fibre detected. No trace asbestos detected.
GW223_3.0	21-JI25430	Jun 30, 2021	Approximate Sample 498g Sample consisted of: Brown coarse-grained sandy soil, corraded material, bitumen and rocks	FA: Chrysotile asbestos detected in weathered fibre insulation-like material. Approximate raw weight of FA = 0.17g Estimated asbestos content in FA = 0.14g* Total estimated asbestos concentration in FA = 0.029% w/w* Organic fibre detected. No trace asbestos detected.

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jul 14, 2021	Indefinite

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7	GW235_3.0	Jun 29, 2021		Soil	S21-Jl25392	X
8	SP237_0.7	Jun 22, 2021		Soil	S21-Jl25393	X
9	TP214_1.2	Jun 22, 2021		Soil	S21-Jl25394	X
10	GW223_3.0	Jun 30, 2021		Soil	S21-Jl25430	X

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External Laboratory	
Test Counts	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	N/A
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.

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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Email: EnviroSampleVic@eurofins.com.au

CHAIN OF CUSTODY RECORD

Company Name*: Environmental Resources Management (ERM)	Contact Name*: Jack Emblen	Purchase Order:	COC Number:
Office Address*: Level 15, 309 Kent Street, Sydney NSW 2000	Project Manager: Ian Batterley	Project Number: 0607031	Quote ID*: 210615 ERMN
	Email for Results*: Ian Batterley; Jack Emblen	Project Name: Unicorn	Data Output Format*: Excel

Special Directions & Comments:

Eurofins | mgt DI Water Batch Number:

Analytes*:

	Sample ID*	Date	Matrix*	PFAS (Extended suite - std)	B7	SVL (including TCE)	Heavy metals + chromium VI	BTEX
1	GW201	15.07.21	W	X	X	X	X	
2	GW252	↓	↓	X	X	X	X	
3	GW253			X	X	X	X	
4	GW254			X	X	X	X	
5	20210715_R01			X	X	X	X	
6	TS/TB							X
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Some common holding times (with correct preservation) - For further information contact the lab

Waters		Soils	
BTEX, MAH, VOC	14 days	BTEX, MAH, VOC	14 days
TRH, PAH, Phenols, Pesticides	7 days	TRH, PAH, Phenols, Pesticides	14 days
Heavy Metals	6 months	Heavy Metals	6 months
Mercury, CrVI	28 days	Mercury, CrVI	28 days
Microbiological testing	24 hours	Microbiological testing	72 hours
BOD, Nitrate, Nitrite, Total N	2 days	Anions	28 days
Solids - TSS, TDS etc	7 days	SPOCAS, pH Field and FOX, CrS	24 hours
Ferrous iron	7 days	ASLP, TCLP	7 days

Containers*: 500P	250P	125P	200A	40mL vial	500 PFAS		Comments

Relinquished By*: Jack Emblen	Laboratory Staff	Turn Around Time:	Method Of Shipment:
Date & Time*: 15.7.21 12:45	Received By: NC	☒ 1 DAY ☐ 2 DAY ☐ 3 DAY	☒ Hand Delivered
Signature*:	Date & Time: 15/7/21 12:46PM	☐ 5 DAY ☐ 10 DAY	☐ Courier
	Signature:	☐ Other:	Courier Consignment #:

Temperature on Arrival: 6.27°C

Report Number: 810687

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

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Site # 1254

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 25079

New Zealand

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

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

Sample Receipt Advice

Company name:	ERM Sydney
Contact name:	Ian Batterley
Project name:	UNICORN
Project ID:	60731
Turnaround time:	1 Day
Date/Time received	Jul 15, 2021 12:46 PM
Eurofins reference	810687

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:

Elvis Dsouza on phone : or by email: ElvisDsouza@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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ABN: 50 005 085 521 web: www.eurofins.com.au email: EnviroSales@eurofins.com

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

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

Project Name: UNICORN
Project ID: 60731

Order No.:
Report #: 810687
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Jul 15, 2021 12:46 PM
Due: Jul 16, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Chromium (hexavalent)	BTEX	Eurofins Suite B7	Eurofins Suite B7 (filtered metals)	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	GW201	Jul 15, 2021		Water	S21-Jl27607	X			X	X	X	
2	GW252	Jul 15, 2021		Water	S21-Jl27608	X			X	X	X	
3	GW253	Jul 15, 2021		Water	S21-Jl27609	X			X	X	X	
4	GW254	Jul 15, 2021		Water	S21-Jl27610	X			X	X	X	
5	20210715_RO 1	Jul 15, 2021		Water	S21-Jl27611	X		X		X	X	
6	TRIP SPIKE	Jul 15, 2021		Soil	S21-Jl27612							X
7	TRIP BLANK	Jul 15, 2021		Soil	S21-Jl27613		X					
Test Counts						5	1	1	4	5	5	1

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
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Attention: **Ian Batterley**

Report **810687-S**
Project name UNICORN
Project ID 60731
Received Date Jul 15, 2021

Client Sample ID			**TRIP SPIKE**	**TRIP BLANK**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S21-Jl27612**	**S21-Jl27613**
Date Sampled			**Jul 15, 2021**	**Jul 15, 2021**
Test/Reference	LOR	Unit		
BTEX				
Benzene	1	%	86	-
Ethylbenzene	1	%	81	-
m&p-Xylenes	1	%	80	-
o-Xylene	1	%	81	-
Toluene	1	%	83	-
Xylenes - Total	1	%	81	-
4-Bromofluorobenzene (surr.)	1	%	90	-
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	%	-	87

Sample History

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

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

Description	Testing Site	Extracted	Holding Time
BTEX	Sydney	Jul 15, 2021	14 Days

- Method: LTM-ORG-2010 TRH C6-C40

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

Project Name: UNICORN
Project ID: 60731

Order No.:
Report #: 810687
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Jul 15, 2021 12:46 PM
Due: Jul 16, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Chromium (hexavalent)	BTEX	Eurofins Suite B7	Eurofins Suite B7 (filtered metals)	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	GW201	Jul 15, 2021		Water	S21-Jl27607	X			X	X	X	
2	GW252	Jul 15, 2021		Water	S21-Jl27608	X			X	X	X	
3	GW253	Jul 15, 2021		Water	S21-Jl27609	X			X	X	X	
4	GW254	Jul 15, 2021		Water	S21-Jl27610	X			X	X	X	
5	20210715_RO 1	Jul 15, 2021		Water	S21-Jl27611	X		X		X	X	
6	TRIP SPIKE	Jul 15, 2021		Soil	S21-Jl27612							X
7	TRIP BLANK	Jul 15, 2021		Soil	S21-Jl27613		X					
Test Counts						5	1	1	4	5	5	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	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	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	
LCS - % Recovery									
BTEX									
Benzene			%	79			70-130	Pass	
Toluene			%	81			70-130	Pass	
Ethylbenzene			%	80			70-130	Pass	
m&p-Xylenes			%	82			70-130	Pass	
o-Xylene			%	81			70-130	Pass	
Xylenes - Total*			%	82			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl27703	NCP	%	78			70-130	Pass	
Toluene	S21-Jl27703	NCP	%	78			70-130	Pass	
Ethylbenzene	S21-Jl27703	NCP	%	79			70-130	Pass	
m&p-Xylenes	S21-Jl27703	NCP	%	80			70-130	Pass	
o-Xylene	S21-Jl27703	NCP	%	79			70-130	Pass	
Xylenes - Total*	S21-Jl27703	NCP	%	79			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl27702	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S21-Jl27702	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S21-Jl27702	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S21-Jl27702	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S21-Jl27702	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S21-Jl27702	NCP	mg/kg	< 0.3	< 0.3	<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

Authorised by:

Emma Beesley	Analytical Services Manager
Roopesh Rangarajan	Senior Analyst-Volatile (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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Accreditation Number 1261
Site Number 18217

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Attention: **Ian Batterley**

Report **810687-W**
Project name UNICORN
Project ID 60731
Received Date Jul 15, 2021

Client Sample ID			**GW201**	[G01]**GW252**	**GW253**	**GW254**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**S21-Jl27607**	**S21-Jl27608**	**S21-Jl27609**	**S21-Jl27610**
Date Sampled			**Jul 15, 2021**	**Jul 15, 2021**	**Jul 15, 2021**	**Jul 15, 2021**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	0.003
4-Bromofluorobenzene (surr.)	1	%	81	78	79	77
Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.4-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl27607	S21-Jl27608	S21-Jl27609	S21-Jl27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
Volatile Organics						
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3.5-Trimethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Butanone (MEK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Propanone (Acetone)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Chlorotoluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4-Methyl-2-pentanone (MIBK)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Allyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon disulfide	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dichlorodifluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Isopropyl benzene (Cumene)	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	0.002
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Styrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	0.003
Total MAH*	0.003	mg/L	0.003	< 0.003	< 0.003	0.003
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromofluorobenzene (surr.)	1	%	81	78	79	77
Toluene-d8 (surr.)	1	%	79	79	80	84

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl27607	S21-Jl27608	S21-Jl27609	S21-Jl27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.005	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.005	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	95	58	81	53
p-Terphenyl-d14 (surr.)	1	%	INT	INT	INT	INT
Semivolatile Organics						
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
1-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.4-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.3.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.2.4.5-Tetrachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.3.5-Trichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
1.4-Dichlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chloronaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Fluorobiphenyl (surr.)	1	%	95	58	81	53
2-Methylnaphthalene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Naphthylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitroaniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2-Picoline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.3.4.6-Tetrachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2.4-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Tribromophenol (surr.)	1	%	143	109	103	53
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl27607	S21-Jl27608	S21-Jl27609	S21-Jl27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.6-Dinitrotoluene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
3-Methylcholanthrene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
3.3'-Dichlorobenzidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Aminobiphenyl	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Bromophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
4-Chlorophenyl phenyl ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
4.4'-DDD	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDE	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
4.4'-DDT	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
7.12-Dimethylbenz(a)anthracene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
a-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Acenaphthene	0.001	mg/L	< 0.001	< 0.005	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acetophenone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aniline	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
b-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzyl chloride	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroethoxy)methane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-chloroisopropyl)ether	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Bis(2-ethylhexyl)phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Butyl benzyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
d-HCH	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-butyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Di-n-octyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.j)acridine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dibenzofuran	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dieldrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethyl phthalate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Dimethylaminoazobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Diphenylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan I	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan II	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endosulfan sulphate	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Endrin aldehyde	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl27607	S21-Jl27608	S21-Jl27609	S21-Jl27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
Semivolatile Organics						
Endrin ketone	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
g-HCH (Lindane)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heptachlor epoxide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorobutadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachlorocyclopentadiene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Hexachloroethane	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methoxychlor	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodibutylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosodipropylamine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
N-Nitrosopiperidine	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Nitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Nitrobenzene-d5 (surr.)	1	%	INT	INT	INT	INT
Pentachlorobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachloronitrobenzene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Phenol-d6 (surr.)	1	%	32	30	31	32
Pronamide	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trifluralin	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	0.002	0.004	0.003	0.002
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium (filtered)	0.001	mg/L	0.001	0.002	0.001	0.002
Copper (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel (filtered)	0.001	mg/L	< 0.001	< 0.001	< 0.001	0.001
Zinc (filtered)	0.005	mg/L	< 0.005	0.052	0.024	0.014
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorobutanoic acid (PFBA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
Perfluoropentanoic acid (PFPeA)[N11]	0.01	ug/L	0.10	0.05	0.02	0.18
Perfluorohexanoic acid (PFHxA)[N11]	0.01	ug/L	0.22	0.24	0.05	0.33
Perfluoroheptanoic acid (PFHpA)[N11]	0.01	ug/L	0.05	0.04	0.01	0.15
Perfluorooctanoic acid (PFOA)[N11]	0.01	ug/L	0.22	0.06	0.05	0.28
Perfluorononanoic acid (PFNA)[N11]	0.01	ug/L	1.1	0.46	1.6	0.02
Perfluorodecanoic acid (PFDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoroundecanoic acid (PFUnDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorododecanoic acid (PFDoDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluorotridecanoic acid (PFTrDA)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-Jl27607	S21-Jl27608	S21-Jl27609	S21-Jl27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
Perfluoroalkyl carboxylic acids (PFCAs)						
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C4-PFBA (surr.)	1	%	54	56	95	68
13C5-PFPeA (surr.)	1	%	56	57	98	70
13C5-PFHxA (surr.)	1	%	56	57	101	69
13C4-PFHpA (surr.)	1	%	58	62	106	76
13C8-PFOA (surr.)	1	%	54	61	105	67
13C5-PFNA (surr.)	1	%	53	64	98	87
13C6-PFDA (surr.)	1	%	55	62	103	73
13C2-PFUnDA (surr.)	1	%	69	70	118	89
13C2-PFDoDA (surr.)	1	%	56	52	91	74
13C2-PFTeDA (surr.)	1	%	36	24	59	51
Perfluoroalkyl sulfonamido substances						
Perfluorooctane sulfonamide (FOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
13C8-FOSA (surr.)	1	%	60	64	110	80
D3-N-MeFOSA (surr.)	1	%	43	47	83	62
D5-N-EtFOSA (surr.)	1	%	42	45	79	60
D7-N-MeFOSE (surr.)	1	%	48	53	85	64
D9-N-EtFOSE (surr.)	1	%	50	54	88	67
D5-N-EtFOSAA (surr.)	1	%	34	33	58	45
D3-N-MeFOSAA (surr.)	1	%	35	36	56	41
Perfluoroalkyl sulfonic acids (PFSAs)						
Perfluorobutanesulfonic acid (PFBS)[N11]	0.01	ug/L	0.04	0.06	< 0.01	0.06
Perfluorononanesulfonic acid (PFNS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
Perfluoropropanesulfonic acid (PFPrS)[N15]	0.01	ug/L	< 0.01	0.01	< 0.01	0.01
Perfluoropentanesulfonic acid (PFPeS)[N15]	0.01	ug/L	0.05	0.07	0.01	0.18
Perfluorohexanesulfonic acid (PFHxS)[N11]	0.01	ug/L	1.4	1.1	0.22	5.1
Perfluoroheptanesulfonic acid (PFHpS)[N15]	0.01	ug/L	0.24	0.05	0.04	0.20
Perfluorooctanesulfonic acid (PFOS)[N11]	0.01	ug/L	16	3.1	3.4	4.8
Perfluorodecanesulfonic acid (PFDS)[N15]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
13C3-PFBS (surr.)	1	%	68	74	119	86
18O2-PFHxS (surr.)	1	%	100	59	113	87
13C8-PFOS (surr.)	1	%	85	94	107	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	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)[N11]	0.05	ug/L	< 0.05	< 0.05	< 0.05	< 0.05
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)[N11]	0.01	ug/L	< 0.01	< 0.01	< 0.01	< 0.01

Client Sample ID			GW201	[G01]GW252	GW253	GW254
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			S21-JI27607	S21-JI27608	S21-JI27609	S21-JI27610
Date Sampled			Jul 15, 2021	Jul 15, 2021	Jul 15, 2021	Jul 15, 2021
Test/Reference	LOR	Unit				
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)						
13C2-4:2 FTS (surr.)	1	%	92	99	176	125
13C2-6:2 FTSA (surr.)	1	%	110	104	177	123
13C2-8:2 FTSA (surr.)	1	%	75	89	147	101
13C2-10:2 FTSA (surr.)	1	%	72	73	123	84
PFASs Summations						
Sum (PFHxS + PFOS)*	0.01	ug/L	17.4	4.2	3.62	9.9
Sum of US EPA PFAS (PFOS + PFOA)*	0.01	ug/L	16.22	3.16	3.45	5.08
Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	0.01	ug/L	17.62	4.26	3.67	10.18
Sum of WA DWER PFAS (n=10)*	0.05	ug/L	18.03	4.65	3.75	10.9
Sum of PFASs (n=30)*	0.1	ug/L	19.42	5.24	5.4	11.31

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-JI27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons			
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
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
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	%	80
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

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
Volatile Organics			
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
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	%	80
Toluene-d8 (surr.)	1	%	83

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
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	%	INT
p-Terphenyl-d14 (surr.)	1	%	99
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-Fluorobiphenyl (surr.)	1	%	INT
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-Tribromophenol (surr.)	1	%	52
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
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-HCH	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-HCH	0.005	mg/L	< 0.005
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-HCH	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

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
Semivolatile Organics			
Endrin ketone	0.005	mg/L	< 0.005
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
g-HCH (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	0.005	mg/L	< 0.005
Nitrobenzene-d5 (surr.)	1	%	89
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
Phenol-d6 (surr.)	1	%	INT
Pronamide	0.005	mg/L	< 0.005
Pyrene	0.001	mg/L	< 0.001
Trifluralin	0.005	mg/L	< 0.005
Chromium (hexavalent)	0.005	mg/L	< 0.005
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

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
Perfluoroalkyl carboxylic acids (PFCAs)			
Perfluorotetradecanoic acid (PFTeDA)[N11]	0.01	ug/L	< 0.01
13C4-PFBA (surr.)	1	%	100
13C5-PFPeA (surr.)	1	%	110
13C5-PFHxA (surr.)	1	%	98
13C4-PFHpA (surr.)	1	%	102
13C8-PFOA (surr.)	1	%	102
13C5-PFNA (surr.)	1	%	126
13C6-PFDA (surr.)	1	%	113
13C2-PFUnDA (surr.)	1	%	125
13C2-PFDoDA (surr.)	1	%	102
13C2-PFTeDA (surr.)	1	%	61
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	%	107
D3-N-MeFOSA (surr.)	1	%	82
D5-N-EtFOSA (surr.)	1	%	78
D7-N-MeFOSE (surr.)	1	%	88
D9-N-EtFOSE (surr.)	1	%	85
D5-N-EtFOSAA (surr.)	1	%	79
D3-N-MeFOSAA (surr.)	1	%	80
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	%	112
18O2-PFHxS (surr.)	1	%	117
13C8-PFOS (surr.)	1	%	125
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

Client Sample ID			20210715_RO1
Sample Matrix			Water
Eurofins Sample No.			S21-Jl27611
Date Sampled			Jul 15, 2021
Test/Reference	LOR	Unit	
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)			
13C2-4:2 FTS (surr.)	1	%	142
13C2-6:2 FTSA (surr.)	1	%	127
13C2-8:2 FTSA (surr.)	1	%	136
13C2-10:2 FTSA (surr.)	1	%	111
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 is reported.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jul 15, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 15, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jul 15, 2021	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Jul 15, 2021	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Jul 15, 2021	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Metals M8 filtered	Sydney	Jul 15, 2021	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Volatile Organics	Sydney	Jul 15, 2021	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
Semivolatile Organics	Sydney	Jul 15, 2021	7 Day
- Method: LTM-ORG-2190 SVOC in Water & Soil by GC-MS			
Chromium (hexavalent)	Sydney	Jul 15, 2021	28 Days
- Method: In-house method E057.1			
Metals M8	Sydney	Jul 16, 2021	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Per- and Polyfluoroalkyl Substances (PFASs)			
Perfluoroalkyl carboxylic acids (PFCAs)	Sydney	Jul 15, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonamido substances	Sydney	Jul 15, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
Perfluoroalkyl sulfonic acids (PFSAs)	Sydney	Jul 15, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)	Sydney	Jul 15, 2021	28 Days
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			
PFASs Summations	Sydney	Jul 15, 2021	
- Method: LTM-ORG-2100 Per- and Polyfluoroalkyl Substances (PFAS)			

eurofins | Environment Testing

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Address: Level 15, 309 Kent St
Sydney
NSW 2000

Project Name: UNICORN
Project ID: 60731

Order No.:
Report #: 810687
Phone: 02 8584 8888
Fax: 02 8584 8800

Received: Jul 15, 2021 12:46 PM
Due: Jul 16, 2021
Priority: 1 Day
Contact Name: Ian Batterley

Eurofins Analytical Services Manager : Elvis Dsouza

Sample Detail						Chromium (hexavalent)	BTEX	Eurofins Suite B7	Eurofins Suite B7 (filtered metals)	Eurofins Suite SVV: SVOC/VOC	Per- and Polyfluoroalkyl Substances (PFASs)	BTEX
Melbourne Laboratory - NATA Site # 1254												
Sydney Laboratory - NATA Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
Mayfield Laboratory - NATA Site # 25079												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	GW201	Jul 15, 2021		Water	S21-Jl27607	X			X	X	X	
2	GW252	Jul 15, 2021		Water	S21-Jl27608	X			X	X	X	
3	GW253	Jul 15, 2021		Water	S21-Jl27609	X			X	X	X	
4	GW254	Jul 15, 2021		Water	S21-Jl27610	X			X	X	X	
5	20210715_RO 1	Jul 15, 2021		Water	S21-Jl27611	X		X		X	X	
6	TRIP SPIKE	Jul 15, 2021		Soil	S21-Jl27612							X
7	TRIP BLANK	Jul 15, 2021		Soil	S21-Jl27613		X					
Test Counts						5	1	1	4	5	5	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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Semivolatile Organics							
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
1-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
1-Naphthylamine	mg/L	< 0.005			0.005	Pass	
1.2-Dichlorobenzene	mg/L	< 0.005			0.005	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	< 0.005			0.005	Pass	
1.2.4.5-Tetrachlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.3.5-Trichlorobenzene	mg/L	< 0.005			0.005	Pass	
1.4-Dichlorobenzene	mg/L	< 0.005			0.005	Pass	
2-Chloronaphthalene	mg/L	< 0.005			0.005	Pass	
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2-Methylnaphthalene	mg/L	< 0.005			0.005	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Naphthylamine	mg/L	< 0.005			0.005	Pass	
2-Nitroaniline	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2-Picoline	mg/L	< 0.005			0.005	Pass	
2.3.4.6-Tetrachlorophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2.4-Dinitrotoluene	mg/L	< 0.005			0.005	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	
2.6-Dinitrotoluene	mg/L	< 0.005			0.005	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
3-Methylcholanthrene	mg/L	< 0.005			0.005	Pass	
3.3'-Dichlorobenzidine	mg/L	< 0.005			0.005	Pass	
4-Aminobiphenyl	mg/L	< 0.005			0.005	Pass	
4-Bromophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
4-Chlorophenyl phenyl ether	mg/L	< 0.005			0.005	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
4.4'-DDD	mg/L	< 0.005			0.005	Pass	
4.4'-DDE	mg/L	< 0.005			0.005	Pass	
4.4'-DDT	mg/L	< 0.005			0.005	Pass	
7.12-Dimethylbenz(a)anthracene	mg/L	< 0.005			0.005	Pass	
a-HCH	mg/L	< 0.005			0.005	Pass	
Acetophenone	mg/L	< 0.005			0.005	Pass	
Aldrin	mg/L	< 0.005			0.005	Pass	
Aniline	mg/L	< 0.005			0.005	Pass	
b-HCH	mg/L	< 0.005			0.005	Pass	
Benzyl chloride	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroethoxy)methane	mg/L	< 0.005			0.005	Pass	
Bis(2-chloroisopropyl)ether	mg/L	< 0.005			0.005	Pass	
Bis(2-ethylhexyl)phthalate	mg/L	< 0.005			0.005	Pass	
Butyl benzyl phthalate	mg/L	< 0.005			0.005	Pass	
d-HCH	mg/L	< 0.005			0.005	Pass	
Di-n-butyl phthalate	mg/L	< 0.005			0.005	Pass	
Di-n-octyl phthalate	mg/L	< 0.005			0.005	Pass	
Dibenz(a.j)acridine	mg/L	< 0.005			0.005	Pass	
Dibenzofuran	mg/L	< 0.005			0.005	Pass	
Dieldrin	mg/L	< 0.005			0.005	Pass	
Diethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethyl phthalate	mg/L	< 0.005			0.005	Pass	
Dimethylaminoazobenzene	mg/L	< 0.005			0.005	Pass	
Diphenylamine	mg/L	< 0.005			0.005	Pass	
Endosulfan I	mg/L	< 0.005			0.005	Pass	
Endosulfan II	mg/L	< 0.005			0.005	Pass	
Endosulfan sulphate	mg/L	< 0.005			0.005	Pass	
Endrin	mg/L	< 0.005			0.005	Pass	
Endrin aldehyde	mg/L	< 0.005			0.005	Pass	
Endrin ketone	mg/L	< 0.005			0.005	Pass	
g-HCH (Lindane)	mg/L	< 0.005			0.005	Pass	
Heptachlor	mg/L	< 0.005			0.005	Pass	
Heptachlor epoxide	mg/L	< 0.005			0.005	Pass	
Hexachlorobenzene	mg/L	< 0.005			0.005	Pass	
Hexachlorobutadiene	mg/L	< 0.005			0.005	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Hexachlorocyclopentadiene	mg/L	< 0.005			0.005	Pass	
Hexachloroethane	mg/L	< 0.005			0.005	Pass	
Methoxychlor	mg/L	< 0.005			0.005	Pass	
N-Nitrosodibutylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosodipropylamine	mg/L	< 0.005			0.005	Pass	
N-Nitrosopiperidine	mg/L	< 0.005			0.005	Pass	
Nitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorobenzene	mg/L	< 0.005			0.005	Pass	
Pentachloronitrobenzene	mg/L	< 0.005			0.005	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Pronamide	mg/L	< 0.005			0.005	Pass	
Trifluralin	mg/L	< 0.005			0.005	Pass	
Method Blank							
Chromium (hexavalent)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	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	
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
TRH C6-C9	%	78			70-130	Pass	
TRH C10-C14	%	95			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	76			70-130	Pass	
TRH >C10-C16	%	94			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	114			70-130	Pass	
Toluene	%	114			70-130	Pass	
Ethylbenzene	%	108			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
o-Xylene	%	110			70-130	Pass	
Xylenes - Total*	%	109			70-130	Pass	
LCS - % Recovery							
Volatile Organics							
1.1-Dichloroethene	%	112			70-130	Pass	
1.1.1-Trichloroethane	%	95			70-130	Pass	
1.2-Dichlorobenzene	%	90			70-130	Pass	
1.2-Dichloroethane	%	107			70-130	Pass	
Trichloroethene	%	95			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	79			70-130	Pass	
Pyrene	%	107			70-130	Pass	
LCS - % Recovery							
Semivolatile Organics							
2-Chlorophenol	%	64			30-130	Pass	
2.4-Dinitrotoluene	%	70			70-130	Pass	
4-Chloro-3-methylphenol	%	59			30-130	Pass	
N-Nitrosodipropylamine	%	90			70-130	Pass	
Pentachlorophenol	%	68			30-130	Pass	
LCS - % Recovery							
Chromium (hexavalent)	%	98			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	97			80-120	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Arsenic (filtered)	%	92			80-120	Pass	
Cadmium	%	96			80-120	Pass	
Cadmium (filtered)	%	96			80-120	Pass	
Chromium	%	94			80-120	Pass	
Chromium (filtered)	%	94			80-120	Pass	
Copper	%	94			80-120	Pass	
Copper (filtered)	%	91			80-120	Pass	
Lead	%	91			80-120	Pass	
Lead (filtered)	%	89			80-120	Pass	
Mercury	%	100			80-120	Pass	
Mercury (filtered)	%	101			80-120	Pass	
Nickel	%	96			80-120	Pass	
Nickel (filtered)	%	94			80-120	Pass	
Zinc	%	95			80-120	Pass	
Zinc (filtered)	%	95			80-120	Pass	
LCS - % Recovery							
Perfluoroalkyl carboxylic acids (PFCAs)							
Perfluorobutanoic acid (PFBA)	%	95			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	%	87			50-150	Pass	
Perfluorohexanoic acid (PFHxA)	%	92			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	%	92			50-150	Pass	
Perfluorooctanoic acid (PFOA)	%	99			50-150	Pass	
Perfluorononanoic acid (PFNA)	%	95			50-150	Pass	
Perfluorodecanoic acid (PFDA)	%	99			50-150	Pass	
Perfluoroundecanoic acid (PFUnDA)	%	99			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	%	100			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	%	117			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	%	95			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonamido substances							
Perfluorooctane sulfonamide (FOSA)	%	89			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	%	92			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	%	90			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)	%	92			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	%	88			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	%	92			50-150	Pass	
LCS - % Recovery							
Perfluoroalkyl sulfonic acids (PFSAs)							
Perfluorobutanesulfonic acid (PFBS)	%	81			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	%	85			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	%	95			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	%	84			50-150	Pass	
Perfluorohexanesulfonic acid (PFHxS)	%	86			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	%	86			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	%	86			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)	%	92			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	%	96			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)	%	101			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S21-Jl19074	NCP	%	78			70-130	Pass	
TRH C10-C14	S21-Jl26443	NCP	%	111			70-130	Pass	
Naphthalene	S21-Jl19074	NCP	%	86			70-130	Pass	
TRH C6-C10	S21-Jl19074	NCP	%	75			70-130	Pass	
TRH >C10-C16	S21-Jl26443	NCP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S21-Jl19074	NCP	%	118			70-130	Pass	
Toluene	S21-Jl19074	NCP	%	106			70-130	Pass	
Ethylbenzene	S21-Jl19074	NCP	%	107			70-130	Pass	
m&p-Xylenes	S21-Jl19074	NCP	%	102			70-130	Pass	
o-Xylene	S21-Jl19074	NCP	%	107			70-130	Pass	
Xylenes - Total*	S21-Jl19074	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Volatile Organics				Result 1					
1.1-Dichloroethene	S21-Jl19074	NCP	%	104			70-130	Pass	
1.1.1-Trichloroethane	S21-Jl19074	NCP	%	98			70-130	Pass	
1.2-Dichlorobenzene	S21-Jl19074	NCP	%	89			70-130	Pass	
1.2-Dichloroethane	S21-Jl19074	NCP	%	107			70-130	Pass	
Trichloroethene	S21-Jl19074	NCP	%	95			70-130	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Jl27607	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	S21-Jl27978	NCP	%	88			75-125	Pass	
Cadmium (filtered)	S21-Jl27978	NCP	%	93			75-125	Pass	
Chromium (filtered)	S21-Jl27978	NCP	%	87			75-125	Pass	
Copper (filtered)	S21-Jl27978	NCP	%	85			75-125	Pass	
Lead (filtered)	S21-Jl27978	NCP	%	81			75-125	Pass	
Mercury (filtered)	S21-Jl27978	NCP	%	92			75-125	Pass	
Nickel (filtered)	S21-Jl27978	NCP	%	86			75-125	Pass	
Zinc (filtered)	N21-Jl16819	NCP	%	88			75-125	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorohexanoic acid (PFHxA)	S21-Jl14060	NCP	%	111			50-150	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl14060	NCP	%	109			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl14060	NCP	%	99			50-150	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl14060	NCP	%	99			50-150	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl14060	NCP	%	99			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1					
Perfluorobutanoic acid (PFBA)	S21-Jl27608	CP	%	73			50-150	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl27608	CP	%	62			50-150	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl27608	CP	%	72			50-150	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl27608	CP	%	78			50-150	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl27608	CP	%	90			50-150	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Perfluoroundecanoic acid (PFUnDA)	S21-Jl27608	CP	%	87			50-150	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl27608	CP	%	87			50-150	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl27608	CP	%	124			50-150	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl27608	CP	%	86			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonamido substances				Result 1					
Perfluorooctane sulfonamide (FOSA)	S21-Jl27608	CP	%	78			50-150	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl27608	CP	%	81			50-150	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl27608	CP	%	80			50-150	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl27608	CP	%	82			50-150	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl27608	CP	%	78			50-150	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl27608	CP	%	81			50-150	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl27608	CP	%	84			50-150	Pass	
Spike - % Recovery									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1					
Perfluorobutanesulfonic acid (PFBS)	S21-Jl27608	CP	%	62			50-150	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl27608	CP	%	107			50-150	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl27608	CP	%	75			50-150	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl27608	CP	%	58			50-150	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl27608	CP	%	103			50-150	Pass	
Spike - % Recovery									
n:2 Fluorotelomer sulfonic acids (n:2 FTSAs)				Result 1					
1H.1H.2H.2H-perfluorohexanesulfonic acid (4:2 FTSA)	S21-Jl27608	CP	%	77			50-150	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl27608	CP	%	79			50-150	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl27608	CP	%	80			50-150	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl27608	CP	%	86			50-150	Pass	
Spike - % Recovery									
				Result 1					
Chromium (hexavalent)	S21-Jl27611	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S21-Jl18897	NCP	%	96			75-125	Pass	
Cadmium	S21-Jl18897	NCP	%	92			75-125	Pass	
Chromium	S21-Jl18897	NCP	%	89			75-125	Pass	
Copper	S21-Jl18897	NCP	%	84			75-125	Pass	
Lead	S21-Jl18897	NCP	%	83			75-125	Pass	
Mercury	S21-Jl18897	NCP	%	91			75-125	Pass	
Nickel	S21-Jl18897	NCP	%	86			75-125	Pass	
Zinc	S21-Jl18897	NCP	%	84			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	S21-Jl19075	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	S21-Jl16386	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S21-Jl16386	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	S21-Jl16386	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Naphthalene	S21-Jl19075	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	S21-Jl19075	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	S21-Jl16386	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S21-Jl16386	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	S21-Jl16386	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S21-Jl19075	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	S21-Jl19075	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.4-Trimethylbenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3.5-Trimethylbenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Butanone (MEK)	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
2-Propanone (Acetone)	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Chlorotoluene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4-Methyl-2-pentanone (MIBK)	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Allyl chloride	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromobenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromochloromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon disulfide	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S21-Jl19075	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.2-Dichloroethene	S21-Jl19075	NCP	mg/L	0.003	0.003	6.0	30%	Pass	

Duplicate									
Volatile Organics				Result 1	Result 2	RPD			
cis-1.3-Dichloropropene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dichlorodifluoromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Isopropyl benzene (Cumene)	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Styrene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S21-Jl19075	NCP	mg/L	0.029	0.030	3.0	30%	Pass	
Trichlorofluoromethane	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S21-Jl19075	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	S21-Jl27607	CP	mg/L	0.002	0.002	8.0	30%	Pass	
Cadmium (filtered)	S21-Jl27607	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium (filtered)	S21-Jl27607	CP	mg/L	0.001	0.002	10	30%	Pass	
Copper (filtered)	S21-Jl27607	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead (filtered)	S21-Jl27607	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury (filtered)	S21-Jl27607	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	S21-Jl27607	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc (filtered)	S21-Jl27607	CP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Perfluoroalkyl carboxylic acids (PFCAs)				Result 1	Result 2	RPD			
Perfluorobutanoic acid (PFBA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
Perfluoropentanoic acid (PFPeA)	S21-Jl27607	CP	ug/L	0.10	0.11	9.0	30%	Pass	
Perfluorohexanoic acid (PFHxA)	S21-Jl27607	CP	ug/L	0.22	0.25	11	30%	Pass	
Perfluoroheptanoic acid (PFHpA)	S21-Jl27607	CP	ug/L	0.05	0.05	7.0	30%	Pass	
Perfluorooctanoic acid (PFOA)	S21-Jl27607	CP	ug/L	0.22	0.25	9.0	30%	Pass	
Perfluorononanoic acid (PFNA)	S21-Jl27607	CP	ug/L	1.1	1.2	6.0	30%	Pass	
Perfluorodecanoic acid (PFDA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoroundecanoic acid (PFUnDA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorododecanoic acid (PFDoDA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotridecanoic acid (PFTrDA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluorotetradecanoic acid (PFTeDA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Perfluoroalkyl sulfonamido substances				Result 1	Result 2	RPD			
Perfluorooctane sulfonamide (FOSA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methylperfluoro-1-octane sulfonamide (N-MeFOSA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethylperfluoro-1-octane sulfonamide (N-EtFOSA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
2-(N-ethylperfluoro-1-octane sulfonamido)-ethanol (N-EtFOSE)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-ethyl-perfluorooctanesulfonamidoacetic acid (N-EtFOSAA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
N-methyl-perfluorooctanesulfonamidoacetic acid (N-MeFOSAA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Perfluoroalkyl sulfonic acids (PFSAs)				Result 1	Result 2	RPD			
Perfluorobutanesulfonic acid (PFBS)	S21-Jl27607	CP	ug/L	0.04	0.04	11	30%	Pass	
Perfluorononanesulfonic acid (PFNS)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropropanesulfonic acid (PFPrS)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Perfluoropentanesulfonic acid (PFPeS)	S21-Jl27607	CP	ug/L	0.05	0.06	12	30%	Pass	
Perfluorohexanesulfonic acid (PFHxS)	S21-Jl27607	CP	ug/L	1.4	1.5	6.0	30%	Pass	
Perfluoroheptanesulfonic acid (PFHpS)	S21-Jl27607	CP	ug/L	0.24	0.28	13	30%	Pass	
Perfluorooctanesulfonic acid (PFOS)	S21-Jl27607	CP	ug/L	16	18	11	30%	Pass	
Perfluorodecanesulfonic acid (PFDS)	S21-Jl27607	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)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorooctanesulfonic acid (6:2 FTSA)	S21-Jl27607	CP	ug/L	< 0.05	< 0.05	<1	30%	Pass	
1H.1H.2H.2H-perfluorodecanesulfonic acid (8:2 FTSA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
1H.1H.2H.2H-perfluorododecanesulfonic acid (10:2 FTSA)	S21-Jl27607	CP	ug/L	< 0.01	< 0.01	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S21-Jl27611	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S21-Jl27611	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S21-Jl27611	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	Q15
Copper	S21-Jl27611	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S21-Jl27611	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S21-Jl27611	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S21-Jl27611	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S21-Jl27611	CP	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
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
N11	Isotope dilution is used for calibration of each native compound for which an exact labelled analogue is available (Isotope Dilution Quantitation). The isotopically labelled analogues allow identification and recovery correction of the concentration of the associated native PFAS compounds.
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:

Emma Beesley	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Andrew Sullivan	Senior Analyst-PFAS (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (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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Australian Laboratory Services Pty Ltd ABN 84 009 936 029. An ALS Limited Company

TAX INVOICE: 1151316212

ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)
MR IAN BATTERLEY
LEVEL 1
45 WATT STREET
NEWCASTLE
NSW 2300

Work Order	Project / Overall Description	Site	Order number	C-O-C number	Contact
ES2123912	Unicorn / ----	----	----	----	MR IAN BATTERLEY

Issue Date : **05-Jul-2021**
Due Date : **05-Aug-2021**

Taxable value : **AUD$** **140.10**
Tax Incurred (GST) : **AUD$** **14.01**
Amount Payable : **AUD$** **154.11**

Work Order Breakdown

Method	Sale Item Descriptions	Quantity	Unit Value (AUD$)	Value (AUD$)	GST (AUD$)	Line Total (AUD$)
Work Order: **ES2123912**	Quote number: **EN/114/20**				Submatrix summary: **1 WATER**	
*Misc	Workorder Admin Fee	1.00	40.00	40.00	4.00	44.00
EP074E	VOC - Halogenated Aliphatics	1.00	31.50	31.50	3.15	34.65
W-26	TRH/BTEXN/PAH/8 Metals	1.00	68.60	68.60	6.86	75.46

** denotes non-discountable item*

- **Please direct all queries to Environmental Division Sydney on +61-2-8784 8555.**

REMITTANCE ADVICE

POST TO: Australian Laboratory Services Pty Ltd
P.O. Box 66 Everton Park
QLD 4053 Australia

EMAIL TO: remittances@alsglobal.com

Vendor bank details
Bank: **Commonwealth Bank**
BSB: **064 000**
Account: **12672843**
Swift Code: **CTBAAU2S**

or Credit Card
Visa
Mastercard
American Express

or Cheque
Payable to Australian Laboratory Services Pty Ltd

Amount Payable
AUD$ 154.11
ALS Client Reference
ENVRES

TAX INVOICE
1151316212

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2123912**	Page	: 1 of 6
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Customer Services ES
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021 12:30
Order number	: ----	Date Analysis Commenced	: 30-Jun-2021
C-O-C number	: ----	Issue Date	: 05-Jul-2021 15:43
Sampler	: MICHAEL MERCER		
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*
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

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

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

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

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

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

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

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- 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.

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	T01_210623	----	----	----	----
				Sampling date / time	23-Jun-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2123912-001	--------	--------	--------	--------
					Result	----	----	----	----
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	----	----	----	----
Chloromethane	74-87-3	50	µg/L		<50	----	----	----	----
Vinyl chloride	75-01-4	50	µg/L		<50	----	----	----	----
Bromomethane	74-83-9	50	µg/L		<50	----	----	----	----
Chloroethane	75-00-3	50	µg/L		<50	----	----	----	----
Trichlorofluoromethane	75-69-4	50	µg/L		<50	----	----	----	----
1.1-Dichloroethene	75-35-4	5	µg/L		<5	----	----	----	----
Iodomethane	74-88-4	5	µg/L		<5	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	5	µg/L		<5	----	----	----	----
1.1-Dichloroethane	75-34-3	5	µg/L		<5	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	5	µg/L		<5	----	----	----	----
1.1.1-Trichloroethane	71-55-6	5	µg/L		<5	----	----	----	----
1.1-Dichloropropylene	563-58-6	5	µg/L		<5	----	----	----	----
Carbon Tetrachloride	56-23-5	5	µg/L		<5	----	----	----	----
1.2-Dichloroethane	107-06-2	5	µg/L		<5	----	----	----	----
Trichloroethene	79-01-6	5	µg/L		<5	----	----	----	----
Dibromomethane	74-95-3	5	µg/L		<5	----	----	----	----
1.1.2-Trichloroethane	79-00-5	5	µg/L		<5	----	----	----	----
1.3-Dichloropropane	142-28-9	5	µg/L		<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L		<5	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L		<5	----	----	----	----
trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L		<5	----	----	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L		<5	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L		<5	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	T01_210623	----	----	----	----
				Sampling date / time	23-Jun-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2123912-001	--------	--------	--------	--------
					Result	----	----	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.2.3-Trichloropropane	96-18-4	5	µg/L		<5	----	----	----	----
Pentachloroethane	76-01-7	5	µg/L		<5	----	----	----	----
1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L		<5	----	----	----	----
Hexachlorobutadiene	87-68-3	5	µg/L		<5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	1.0	µg/L		<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L		<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L		<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L		<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L		<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L		<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L		<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L		<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L		<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L		<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L		<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L		<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L		<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L		<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L		<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L		<100	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	T01_210623	----	----	----	----
				Sampling date / time	23-Jun-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2123912-001	--------	--------	--------	--------	
				Result	----	----	----	----	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----	
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----	
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L	<100	----	----	----	----	
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L	<100	----	----	----	----	
EP080: BTEXN									
Benzene	71-43-2	1	µg/L	<1	----	----	----	----	
Toluene	108-88-3	2	µg/L	<2	----	----	----	----	
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----	
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----	
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----	
^ **Total Xylenes**	----	2	µg/L	<2	----	----	----	----	
^ **Sum of BTEX**	----	1	µg/L	<1	----	----	----	----	
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----	
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%	**112**	----	----	----	----	
Toluene-D8	2037-26-5	5	%	**115**	----	----	----	----	
4-Bromofluorobenzene	460-00-4	5	%	**114**	----	----	----	----	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%	**26.5**	----	----	----	----	
2-Chlorophenol-D4	93951-73-6	1.0	%	**48.9**	----	----	----	----	
2.4.6-Tribromophenol	118-79-6	1.0	%	**59.4**	----	----	----	----	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%	**57.5**	----	----	----	----	
Anthracene-d10	1719-06-8	1.0	%	**63.8**	----	----	----	----	
4-Terphenyl-d14	1718-51-0	1.0	%	**78.7**	----	----	----	----	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%	**99.0**	----	----	----	----	
Toluene-D8	2037-26-5	2	%	**101**	----	----	----	----	
4-Bromofluorobenzene	460-00-4	2	%	**109**	----	----	----	----	

Surrogate Control Limits

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2123912**	Page	: 1 of 8
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Customer Services ES
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021
Order number	: ----	Date Analysis Commenced	: 30-Jun-2021
C-O-C number	: ----	Issue Date	: 05-Jul-2021
Sampler	: MICHAEL MERCER		
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*
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW
Rassem Ayoubi	Senior Organic Chemist	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

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

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

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

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3765372)									
ES2123905-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES2124042-002	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.023	0.024	5.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3765371)									
ES2123728-002	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2123912-001	T01_210623	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3765250)									
ES2123791-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3765250) - continued									
ES2123791-001	Anonymous	EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
ES2123912-001	T01_210623	EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3765250) - continued									
ES2123912-001	T01_210623	EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3765249)									
ES2123791-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2123912-001	T01_210623	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3765249)									
ES2123791-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2123912-001	T01_210623	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3765249)									
ES2123791-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2123912-001	T01_210623	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3765372)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	92.4	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	87.6	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	87.8	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	93.7	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	89.2	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	86.7	82.0	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	90.9	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3765371)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	94.8	83.0	105
EP074E: Halogenated Aliphatic Compounds (QCLot: 3765250)								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	100 µg/L	78.1	60.6	138
EP074: Chloromethane	74-87-3	50	µg/L	<50	100 µg/L	80.8	67.4	130
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	100 µg/L	111	69.4	129
EP074: Bromomethane	74-83-9	50	µg/L	<50	100 µg/L	90.0	56.0	140
EP074: Chloroethane	75-00-3	50	µg/L	<50	100 µg/L	85.5	61.0	139
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	100 µg/L	100	69.0	131
EP074: 1.1-Dichloroethene	75-35-4	5	µg/L	<5	10 µg/L	93.9	70.0	124
EP074: Iodomethane	74-88-4	5	µg/L	<5	10 µg/L	71.7	70.2	128
EP074: trans-1.2-Dichloroethene	156-60-5	5	µg/L	<5	10 µg/L	92.4	74.0	118
EP074: 1.1-Dichloroethane	75-34-3	5	µg/L	<5	10 µg/L	89.6	74.0	120
EP074: cis-1.2-Dichloroethene	156-59-2	5	µg/L	<5	10 µg/L	90.7	77.0	119
EP074: 1.1.1-Trichloroethane	71-55-6	5	µg/L	<5	10 µg/L	100	67.0	119
EP074: 1.1-Dichloropropylene	563-58-6	5	µg/L	<5	10 µg/L	91.9	73.0	119
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	10 µg/L	100	62.0	120
EP074: 1.2-Dichloroethane	107-06-2	5	µg/L	<5	10 µg/L	97.7	73.0	123
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	100	76.0	118
EP074: Dibromomethane	74-95-3	5	µg/L	<5	10 µg/L	95.8	73.0	119
EP074: 1.1.2-Trichloroethane	79-00-5	5	µg/L	<5	10 µg/L	95.9	72.0	126
EP074: 1.3-Dichloropropane	142-28-9	5	µg/L	<5	10 µg/L	99.1	71.0	129
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	91.5	72.0	124
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	5	µg/L	<5	10 µg/L	102	66.0	114
EP074: trans-1.4-Dichloro-2-butene	110-57-6	5	µg/L	<5	10 µg/L	102	60.0	120
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	10 µg/L	102	70.6	128
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	5	µg/L	<5	10 µg/L	102	70.0	124

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3765250) - continued								
EP074: 1.2.3-Trichloropropane	96-18-4	5	µg/L	<5	10 µg/L	100	74.0	126
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	10 µg/L	119	71.8	126
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	10 µg/L	94.2	66.4	136
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	10 µg/L	123	58.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3762513)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	69.3	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	81.3	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	79.4	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	81.0	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	75.9	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	70.1	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	67.2	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	71.5	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	66.6	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	66.1	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	72.6	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	79.5	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	74.8	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	85.0	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	86.5	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	80.0	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762512)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	83.1	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	84.3	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	119	56.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3765249)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	80.3	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762512)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	83.7	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	71.2	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	97.0	61.5	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3765249)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	84.6	75.0	127
EP080: BTEXN (QCLot: 3765249)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	84.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	95.0	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	98.6	70.0	120

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	LCS: Spike Recovery (%)	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 3765249) - continued								
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	98.9	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	105	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	97.4	70.0	120

Matrix Spike (MS) Report

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

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3765372)							
ES2123905-002	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	123	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	118	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	122	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	95.2	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	93.1	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	121	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	126	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3765371)							
ES2123905-001	Anonymous	EG035F: Mercury	7439-97-6	0.01 mg/L	90.6	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3765250)							
ES2123791-001	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	25 µg/L	71.1	70.0	130
		EP074: Trichloroethene	79-01-6	25 µg/L	80.5	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3765249)							
ES2123791-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	96.8	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3765249)							
ES2123791-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	92.4	70.0	130
EP080: BTEXN (QCLot: 3765249)							
ES2123791-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	95.8	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	98.0	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	101	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	100	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	105	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	94.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2123912**	Page	: 1 of 5
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021
Site	: ----	Issue Date	: 05-Jul-2021
Sampler	: MICHAEL MERCER	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

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type / Method	Count QC	Count Regular	Rate (%) Actual	Rate (%) Expected	Quality Control Specification
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	11	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	11	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	13	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation: Date extracted	Extraction / Preparation: Due for extraction	Extraction / Preparation: Evaluation	Analysis: Date analysed	Analysis: Due for analysis	Analysis: Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
T01_210623	**23-Jun-2021**	**----**	----	----	**30-Jun-2021**	20-Dec-2021	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
T01_210623	**23-Jun-2021**	**----**	----	----	**01-Jul-2021**	21-Jul-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - HCl (EP074)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**01-Jul-2021**	07-Jul-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	30-Jun-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	30-Jun-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Amber VOC Vial - HCl (EP080)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**01-Jul-2021**	07-Jul-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	30-Jun-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Amber VOC Vial - HCl (EP080)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**01-Jul-2021**	07-Jul-2021	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Amber VOC Vial - HCl (EP080)							
T01_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**01-Jul-2021**	07-Jul-2021	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	17	**11.76**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	11	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	15	**13.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	17	**5.88**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	11	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	13	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	15	**6.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Sydney Laboratory: Unit F5 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 №	Project Manager: Ian Batterley
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name: UNICORN	EDD Format (ESdat, EQuIS, Custom): Esdat/ EQUIS
Contact Name	Michael Mercer	Sampler(s): Michael Mercer	
Phone №	439623103	Handed over by: Michael Mercer	
Special Directions		Email for Invoice: Ian.batterley@erm.com	
Purchase Order		Email for Results: Ian.batterley@erm.com and michael.mercer@erm.com and anthony.richard@erm.com	
Quote ID №	210615ERMN		

Analyses

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA Vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Antimony/Al/Sb/Sn - WA Containers)

Turnaround Time (TAT) Requirements (voucher will be 5 days if not provided)
- Overnight (9am)*
- 1 Day* | 2 Day*
- 3 Day* | 5 Day
- Other ( )

* Surcharges apply

Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	B7A	SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	+ ACM	Sample Comments / Dangerous Goods Hazard Warning
MW01	23/06/21	W		X	X		X	X						
MW02	23/06/21	W		X	X		X	X						
MW05	23/06/21	W		X	X		X	X						
BH13	24/06/21	W		X	X		X	X						
X2	23/06/21	W		X	X		X	X						
X4	23/06/21	W		X	X		X	X						
X5	23/06/21	W		X	X		X	X						
X7	23/06/21	W		X	X		X	X						
X8	23/06/21	W		X	X		X	X						
D01_210623	23/06/21	W			X		X							
T01_210623	23/06/21	W			X		X							FORWARD TO ALS (DUP)
R01_210623	23/06/21	W		X	X		X							
TS	24/06/21	W										X		
TB	24/06/21	W									X			
TS	24/06/21	S										X		

Environmental Division
Sydney
Work Order Reference
ES2123912

Telephone : +61-2-8784 8555

 Q53009_R7 Modified by: Dr. R Symons Approved by: T. Lakeland Approved on: 17 August 2017

NC 28/6/21 10:33AM 8.4°C 806169

Rec. Syd 54/ 28/6/21 1500 7.5

James ALS 28/6/21 12:30pm 7°C

TP210_1.4	23/06/21	S		X		X	X	X	X																						
TP210_1.8	23/06/21	s		X		X	X	X	X																						
TP211_0.5	23/06/21	s		X		X	X	X	X																						
TP211_1.0	23/06/21	s		X		X	X	X	X																						
TP212_0.7	23/06/21	s		X		X	X	X	X																						
TP212_1.8	23/06/21	s		X		X	X	X	X																						
TP213_0.6	23/06/21	s		X		X	X	X	X																						
TP213_1.0	23/06/21	s	X																												
TP213_1.5	23/06/21	s		X		X	X	X	X																						
TP214_0.8	22/06/21	s		X		X	X	X	X																						
TP214_1.2	22/06/21	s		X		X	X	X	X																						
TP214_ACM	22/06/21	s											X																		
TP221_0.2	24/06/21	s		X		X	X	X	X																						
TP221_1.0	24/06/21	s		X		X	X	X	X																						
TP224_0.5	24/06/21	s		X		X	X	X	X																						
TP224_1.5	24/06/21	s		X		X	X	X	X																						
TP232_0.5	24/06/21	s		X		X	X	X	X																						
TP232_1.2	24/06/21	s		X		X	X	X	X																						
Dup01_210622	22/06/21	s		X		X	X	X																							
Trip01_210622	22/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
Dup02_210623	23/06/21	s		X		X	X	X																							
Trip02_210623	23/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
Dup03_210624	24/06/21	s		X		X	X	X																							
Trip_210624	24/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
SP236_0.4	22/06/21	s		X		X	X	X	X																						
SP237_0.7	22/06/21	s		X		X	X	X	X																						

NC 28/6/21 10:33 AM 8.4°C 806169

Rec - Soffan 28/6/21 15:00 7°C

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2123913**	Page	: 1 of 8
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Customer Services ES
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021 12:30
Order number	: ----	Date Analysis Commenced	: 29-Jun-2021
C-O-C number	: ----	Issue Date	: 05-Jul-2021 16:59
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
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.
- 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.
- 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	Trip01_210622	Trip02_210623	Trip_210624	----	----
			Sampling date / time	22-Jun-2021 00:00	23-Jun-2021 00:00	24-Jun-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2123913-001	ES2123913-002	ES2123913-003	--------	--------
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	6.8	19.0	4.2	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	9	<5	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	5	7	<2	----	----
Copper	7440-50-8	5	mg/kg	31	18	6	----	----
Lead	7439-92-1	5	mg/kg	150	66	8	----	----
Nickel	7440-02-0	2	mg/kg	7	3	3	----	----
Zinc	7440-66-6	5	mg/kg	455	60	183	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.2	<0.1	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip01_210622	Trip02_210623	Trip_210624	----	----
				Sampling date / time	22-Jun-2021 00:00	23-Jun-2021 00:00	24-Jun-2021 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2123913-001	ES2123913-002	ES2123913-003	--------	--------
					Result	Result	Result	----	----
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	Trip01_210622	Trip02_210623	Trip_210624	----	----
			Sampling date / time	22-Jun-2021 00:00	23-Jun-2021 00:00	24-Jun-2021 00:00	----	----
Compound	CAS Number	LOR	Unit	ES2123913-001	ES2123913-002	ES2123913-003	--------	--------
				Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	----	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	----	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	----	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	----	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	**0.0003**	<0.0002	<0.0002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	**0.0040**	**0.0002**	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip01_210622	Trip02_210623	Trip_210624	----	----
				Sampling date / time	22-Jun-2021 00:00	23-Jun-2021 00:00	24-Jun-2021 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2123913-001	ES2123913-002	ES2123913-003	--------	--------
					Result	Result	Result	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	<0.0002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	Trip01_210622	Trip02_210623	Trip_210624	----	----
				Sampling date / time	22-Jun-2021 00:00	23-Jun-2021 00:00	24-Jun-2021 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2123913-001	ES2123913-002	ES2123913-003	--------	--------
					Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	<0.0005	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		**0.0043**	**0.0002**	<0.0002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		**0.0043**	**0.0002**	<0.0002	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		**0.0043**	**0.0002**	<0.0002	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		**94.9**	**85.9**	**91.0**	----	----
Toluene-D8	2037-26-5	0.5	%		**108**	**105**	**107**	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		**104**	**96.3**	**99.8**	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**88.1**	**90.9**	**89.7**	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**86.6**	**90.0**	**87.4**	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**79.5**	**83.7**	**79.4**	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**96.7**	**102**	**101**	----	----
Anthracene-d10	1719-06-8	0.5	%		**91.0**	**95.9**	**93.1**	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**81.4**	**86.2**	**83.9**	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**87.8**	**79.2**	**84.5**	----	----
Toluene-D8	2037-26-5	0.2	%		**110**	**107**	**109**	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**107**	**102**	**103**	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		**85.5**	**74.5**	**82.5**	----	----
13C8-PFOA	----	0.0002	%		**85.0**	**81.0**	**86.5**	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	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	: **ES2123913**	Page	: 1 of 15
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Customer Services ES
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021
Order number	: ----	Date Analysis Commenced	: 29-Jun-2021
C-O-C number	: ----	Issue Date	: 05-Jul-2021
Sampler	: ----		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 3		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Organics, Smithfield, NSW
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 (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3768821)									
ES2123899-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	10	11	11.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	9	17.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	12	17	33.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	11	13	12.5	No Limit
ES2123946-006	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	8	5	42.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	8	6	39.6	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3763888)									
ES2123301-021	Anonymous	EA055: Moisture Content	----	0.1	%	3.4	3.5	3.1	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3768820)									
ES2123899-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2123946-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3767257)									
ES2122395-003	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3762215)									
ES2123913-001	Trip01_210622	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3762215) - continued									
ES2123913-001	Trip01_210622	EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3762240)									
ES2123787-004	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3762240) - continued									
ES2123787-004	Anonymous	EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3762641)									
ES2123870-021	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.7	0.7	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.7	0.8	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.6	0.6	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	0.8	0.8	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	0.6	0.6	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	3.4	4.0	16.2	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	0.6	0.0	No Limit
ES2123870-030	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3762641) - continued									
ES2123870-030	Anonymous	EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	0.8	0.9	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	0.9	0.9	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	0.6	0.7	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	0.8	0.8	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	0.5	0.6	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	3.6	4.4	20.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	0.6	0.7	15.9	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3762214)									
ES2123913-001	Trip01_210622	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3762239)									
ES2123787-011	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2123787-004	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3762640)									
ES2123870-021	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	1240	1210	2.7	0% - 50%
		EP071: C29 - C36 Fraction	----	100	mg/kg	1920	1800	6.3	0% - 50%
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2123870-030	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	1410	1380	1.7	0% - 50%
		EP071: C29 - C36 Fraction	----	100	mg/kg	2060	2190	5.7	0% - 20%
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3762214)									
ES2123913-001	Trip01_210622	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3762239)									
ES2123787-011	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2123787-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3762640)									
ES2123870-021	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	2550	2540	0.0	0% - 20%
		EP071: >C34 - C40 Fraction	----	100	mg/kg	1320	1320	0.0	0% - 50%
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2123870-030	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	2970	3060	2.9	0% - 20%
		EP071: >C34 - C40 Fraction	----	100	mg/kg	1470	1530	4.0	0% - 50%

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3762640) - continued									
ES2123870-030	Anonymous	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 3762214)									
ES2123913-001	Trip01_210622	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 3762239)									
ES2123787-011	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2123787-004	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3768548)									
ES2123913-003	Trip_210624	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.0009	127	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
ES2123575-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3768548)									
ES2123913-003	Trip_210624	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3768548) - continued									
ES2123913-003	Trip_210624	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2123575-003	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0009	0.0009	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0011	0.0011	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0004	0.0004	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0039	0.0042	6.9	0% - 20%
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0018	0.0020	11.7	0% - 50%
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3768548)									
ES2123913-003	Trip_210624	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2123575-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3768548) - continued									
ES2123575-003	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3768548)									
ES2123913-003	Trip_210624	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2123575-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3768821)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	103	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	88.9	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	110	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	98.8	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	98.3	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	91.0	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3768820)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.4	70.0	125
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3767257)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	102	68.0	114
EP074E: Halogenated Aliphatic Compounds (QCLot: 3762215)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	72.0	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	84.8	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	126	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	66.8	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	67.0	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	86.1	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	61.0	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	64.5	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	83.4	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	92.6	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	85.9	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	96.2	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	89.7	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	100	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	94.7	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	88.8	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	89.2	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	102	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	104	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	82.8	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	103	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	103	54.0	128

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3762215) - continued								
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	95.3	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	103	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	105	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	132	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	127	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	111	50.0	128
EP074E: Halogenated Aliphatic Compounds (QCLot: 3762240)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	98.8	30.0	148
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	96.9	41.0	141
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	87.7	43.0	147
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	95.3	47.0	141
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	86.7	49.0	143
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	89.0	49.0	135
EP074: 1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	91.5	54.0	126
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	91.1	43.0	129
EP074: trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	89.7	64.0	120
EP074: 1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	92.3	67.0	125
EP074: cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	91.1	69.0	121
EP074: 1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	92.6	65.0	117
EP074: 1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	91.5	65.0	123
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	93.8	59.0	125
EP074: 1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	96.0	65.0	125
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	94.0	70.0	118
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	96.3	68.0	118
EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	96.0	64.0	126
EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	96.2	68.0	122
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	90.9	67.0	143
EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	94.3	62.0	122
EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	93.7	54.0	128
EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	95.3	55.0	129
EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	97.1	65.0	121
EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	97.6	61.0	125
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	95.6	19.8	134
EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	94.0	53.0	129
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	97.4	50.0	128
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3762641)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	98.9	73.0	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3762641) - continued								
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	101	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	101	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.0	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	101	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	103	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	92.7	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	97.2	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	90.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	104	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	97.0	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	101	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	99.6	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	93.0	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762214)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	88.2	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762239)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	108	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762640)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	92.2	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	99.6	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	92.5	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762214)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	86.7	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762239)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	106	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762640)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	100	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.3	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	75.7	63.0	131
EP080: BTEXN (QCLot: 3762214)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	81.8	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	98.1	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	95.8	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.3	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	97.8	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	110	63.0	119

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 3762239)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	90.2	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	96.4	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	96.2	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	92.0	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	88.8	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.9	63.0	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3768548)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.8	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.2	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	70.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	73.2	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3768548)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	82.7	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.6	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.4	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3768548)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	96.8	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	81.1	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.6	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.7	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3768548)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	LCS: Spike Recovery (%)	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3768548) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	89.6	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	79.2	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	91.6	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	86.4	69.2	143

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3768821)							
ES2123899-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	95.4	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.2	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	99.0	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	95.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	96.4	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	94.6	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	93.4	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3768820)							
ES2123899-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	96.0	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3767257)							
ES2122395-006	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	93.1	70.0	130
ES2122395-006	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	82.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3762215)							
ES2123913-001	Trip01_210622	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	70.8	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	99.8	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3762240)							
ES2123787-004	Anonymous	EP074: 1.1-Dichloroethene	75-35-4	2.5 mg/kg	80.8	70.0	130
		EP074: Trichloroethene	79-01-6	2.5 mg/kg	105	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3762641)							
ES2123870-021	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	89.5	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	93.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762214)							
ES2123913-001	Trip01_210622	EP080: C6 - C9 Fraction	----	32.5 mg/kg	91.8	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762239)							
ES2123787-004	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	98.5	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3762640)							
ES2123870-021	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	106	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	124	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	129	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762214)							
ES2123913-001	Trip01_210622	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	90.2	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762239)							
ES2123787-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	95.6	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3762640)							
ES2123870-021	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	132	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	123	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	119	52.0	132
EP080: BTEXN (QCLot: 3762214)							
ES2123913-001	Trip01_210622	EP080: Benzene	71-43-2	2.5 mg/kg	82.8	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	96.7	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	102	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	101	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	105	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	105	70.0	130
EP080: BTEXN (QCLot: 3762239)							
ES2123787-004	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	82.6	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	108	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	110	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	110	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	109	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	102	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3768548)							
ES2123913-003	Trip_210624	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	81.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	93.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	88.4	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	73.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	72.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	98.8	59.0	134

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3768548)							
ES2123913-003	Trip_210624	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	86.6	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	85.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	87.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	92.0	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	85.2	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	87.2	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	89.6	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	82.4	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	93.6	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	87.2	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	91.0	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3768548)							
ES2123913-003	Trip_210624	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	85.6	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	97.6	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	80.0	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	85.1	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	87.8	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	86.8	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	90.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3768548)							
ES2123913-003	Trip_210624	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	96.4	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	111	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	70.8	69.2	143

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2123913**	Page	: 1 of 8
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 28-Jun-2021
Site	: ----	Issue Date	: 05-Jul-2021
Sampler	: ----	No. of samples received	: 3
Order number	: ----	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **NO Matrix Spike outliers occur.**
- **For all regular sample matrices, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

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

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
Hexavalent Chromium by Alkaline Digestion and DA Finish	1	19	5.26	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*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) Trip01_210622	**22-Jun-2021**	**----**	----	----	**29-Jun-2021**	06-Jul-2021	✓
Soil Glass Jar - Unpreserved (EA055) Trip02_210623	**23-Jun-2021**	**----**	----	----	**29-Jun-2021**	07-Jul-2021	✓
Soil Glass Jar - Unpreserved (EA055) Trip_210624	**24-Jun-2021**	**----**	----	----	**29-Jun-2021**	08-Jul-2021	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) Trip01_210622	**22-Jun-2021**	**01-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	19-Dec-2021	✓
Soil Glass Jar - Unpreserved (EG005T) Trip02_210623	**23-Jun-2021**	**01-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	20-Dec-2021	✓
Soil Glass Jar - Unpreserved (EG005T) Trip_210624	**24-Jun-2021**	**01-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	21-Dec-2021	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) Trip01_210622	**22-Jun-2021**	**01-Jul-2021**	20-Jul-2021	✓	**02-Jul-2021**	20-Jul-2021	✓
Soil Glass Jar - Unpreserved (EG035T) Trip02_210623	**23-Jun-2021**	**01-Jul-2021**	21-Jul-2021	✓	**02-Jul-2021**	21-Jul-2021	✓
Soil Glass Jar - Unpreserved (EG035T) Trip_210624	**24-Jun-2021**	**01-Jul-2021**	22-Jul-2021	✓	**02-Jul-2021**	22-Jul-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
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G) Trip01_210622	**22-Jun-2021**	**01-Jul-2021**	20-Jul-2021	✓	**01-Jul-2021**	08-Jul-2021	✓
Soil Glass Jar - Unpreserved (EG048G) Trip02_210623	**23-Jun-2021**	**01-Jul-2021**	21-Jul-2021	✓	**01-Jul-2021**	08-Jul-2021	✓
Soil Glass Jar - Unpreserved (EG048G) Trip_210624	**24-Jun-2021**	**01-Jul-2021**	22-Jul-2021	✓	**01-Jul-2021**	08-Jul-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074) Trip01_210622	**22-Jun-2021**	**29-Jun-2021**	29-Jun-2021	✓	**29-Jun-2021**	29-Jun-2021	✓
Soil Glass Jar - Unpreserved (EP074) Trip02_210623	**23-Jun-2021**	**29-Jun-2021**	30-Jun-2021	✓	**29-Jun-2021**	30-Jun-2021	✓
Soil Glass Jar - Unpreserved (EP074) Trip_210624	**24-Jun-2021**	**29-Jun-2021**	01-Jul-2021	✓	**29-Jun-2021**	01-Jul-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) Trip01_210622	**22-Jun-2021**	**30-Jun-2021**	06-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) Trip02_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) Trip_210624	**24-Jun-2021**	**30-Jun-2021**	08-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) Trip01_210622	**22-Jun-2021**	**29-Jun-2021**	06-Jul-2021	✓	**29-Jun-2021**	06-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip01_210622	**22-Jun-2021**	**30-Jun-2021**	06-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip02_210623	**23-Jun-2021**	**29-Jun-2021**	07-Jul-2021	✓	**29-Jun-2021**	07-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip02_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip_210624	**24-Jun-2021**	**29-Jun-2021**	08-Jul-2021	✓	**29-Jun-2021**	08-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip_210624	**24-Jun-2021**	**30-Jun-2021**	08-Jul-2021	✓	**02-Jul-2021**	09-Aug-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
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) Trip01_210622	**22-Jun-2021**	**29-Jun-2021**	06-Jul-2021	✓	**29-Jun-2021**	06-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip01_210622	**22-Jun-2021**	**30-Jun-2021**	06-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip02_210623	**23-Jun-2021**	**29-Jun-2021**	07-Jul-2021	✓	**29-Jun-2021**	07-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip02_210623	**23-Jun-2021**	**30-Jun-2021**	07-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip_210624	**24-Jun-2021**	**29-Jun-2021**	08-Jul-2021	✓	**29-Jun-2021**	08-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071) Trip_210624	**24-Jun-2021**	**30-Jun-2021**	08-Jul-2021	✓	**02-Jul-2021**	09-Aug-2021	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) Trip01_210622	**22-Jun-2021**	**29-Jun-2021**	06-Jul-2021	✓	**29-Jun-2021**	06-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip02_210623	**23-Jun-2021**	**29-Jun-2021**	07-Jul-2021	✓	**29-Jun-2021**	07-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP080) Trip_210624	**24-Jun-2021**	**29-Jun-2021**	08-Jul-2021	✓	**29-Jun-2021**	08-Jul-2021	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) Trip01_210622	**22-Jun-2021**	**02-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip02_210623	**23-Jun-2021**	**02-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip_210624	**24-Jun-2021**	**02-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) Trip01_210622	**22-Jun-2021**	**02-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip02_210623	**23-Jun-2021**	**02-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip_210624	**24-Jun-2021**	**02-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) Trip01_210622	**22-Jun-2021**	**02-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip02_210623	**23-Jun-2021**	**02-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip_210624	**24-Jun-2021**	**02-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	11-Aug-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
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) Trip01_210622	**22-Jun-2021**	**02-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip02_210623	**23-Jun-2021**	**02-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip_210624	**24-Jun-2021**	**02-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) Trip01_210622	**22-Jun-2021**	**02-Jul-2021**	19-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip02_210623	**23-Jun-2021**	**02-Jul-2021**	20-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓
HDPE Soil Jar (EP231X) Trip_210624	**24-Jun-2021**	**02-Jul-2021**	21-Dec-2021	✓	**02-Jul-2021**	11-Aug-2021	✓

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)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	19	**5.26**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	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	2	20	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	3	27	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**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
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	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	27	**7.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	5	**40.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**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
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	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	27	**7.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	5	**40.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	20	**5.00**	**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
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	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	27	**7.41**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	2	5	**40.00**	**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).
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)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
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
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.

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

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 №	Project Manager: Ian Batterley
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name: UNICORN	EDD Format (ESdat, EQuIS, Custom): Esdat/ EQUIS
Contact Name	Michael Mercer	Sampler(s)	Michael Mercer
Phone №	439623103	Handed over by	Michael Mercer
Special Directions		Email for Invoice	lan.batterley@erm.com
Purchase Order		Email for Results	lan.batterley@erm.com and michael.mercer@erm.com and anthony.richard@erm.com
Quote ID №	210615ERMN		

Analyses (Please tick the required boxes and specify Tests or Profiles. Where results are required for analytes in addition to standard profiles, please list these in the Sample Comments / Dangerous Goods Hazard Warning section)

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS Bottle; Jar (Glass or HDPE); Other (Asbestos AS4964 - WA Guidelines)

Turnaround Time (TAT) Requirements (Prior storage may be necessary if not delivered): Overnight (9am)*; 1 Day*; 2 Day*; 3 Day*; 5 Day; * Surcharges apply; Other ( )

Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	BTA	SVV (including trichloroethylene (TCE) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	+ ACM	Sample Comments / Dangerous Goods Hazard Warning
MW01	23/06/21	W		X	X		X	X						
MW02	23/06/21	W		X	X		X	X						
MW05	23/06/21	W		X	X		X	X						
BH13	24/06/21	W		X	X		X	X						
X2	23/06/21	W		X	X		X	X						
X4	23/06/21	W		X	X		X	X						
X5	23/06/21	W		X	X		X	X						
X7	23/06/21	W		X	X		X	X						
X8	23/06/21	W		X	X		X	X						
D01_210623	23/06/21	W			X		X							
T01_210623	23/06/21	W			X		X							FORWARD TO ALS (DUP)
R01_210623	23/06/21	W		X	X		X							
TS	24/06/21	W										X		
TB	24/06/21	W									X			
TS	24/06/21	S										X		

Environmental Division Sydney

Work Order Reference

ES2123913

Telephone : +61-2-8784 8555

 QS3009_R7 Modified by: Dr. R Symons Approved by: T. Lakeland Approved on: 17 August 2017

NC 28/6/21 10:33AM 8.4°C 806169

Rec: soft 28/6/21 1500 7.5

James ALS 28/6/21 12:30pm 7°C

	TP210_1.4	23/06/21	S		X		X	X	X	X																						
	TP210_1.8	23/06/21	s		X		X	X	X	X																						
	TP211_0.5	23/06/21	s		X		X	X	X	X																						
	TP211_1.0	23/06/21	s		X		X	X	X	X																						
	TP212_0.7	23/06/21	s		X		X	X	X	X																						
	TP212_1.8	23/06/21	s		X		X	X	X	X																						
	TP213_0.6	23/06/21	s		X		X	X	X	X																						
	TP213_1.0	23/06/21	s	X																												
	TP213_1.5	23/06/21	s		X		X	X	X	X																						
	TP214_0.8	22/06/21	s		X		X	X	X	X																						
	TP214_1.2	22/06/21	s		X		X	X	X	X																						
	TP214_ACM	22/06/21	s										X																			
	TP221_0.2	24/06/21	s		X		X	X	X	X																						
	TP221_1.0	24/06/21	s		X		X	X	X	X																						
	TP224_0.5	24/06/21	s		X		X	X	X	X																						
	TP224_1.5	24/06/21	s		X		X	X	X	X																						
	TP232_0.5	24/06/21	s		X		X	X	X	X																						
	TP232_1.2	24/06/21	s		X		X	X	X	X																						
	Dup01_210622	22/06/21	s		X		X	X	X																							
1	Trip01_210622	22/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
	Dup02_210623	23/06/21	s		X		X	X	X																							
2	Trip02_210623	23/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
	Dup03_210624	24/06/21	s		X		X	X	X																							
3	Trip_210624	24/06/21	s		X		X	X	X																							FORWARD TO ALS (DUP)
	SP236_0.4	22/06/21	s		X		X	X	X	X																						
	SP237_0.7	22/06/21	s		X		X	X	X	X																						

NC 28/6/21 10.33 AM 8.4°C 806169

Rec— SCGH/— 28/6/21 1500 7.5

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2124885**	Page	: 1 of 15
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Monica Wright
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 06-Jul-2021 15:00
Order number	: ----	Date Analysis Commenced	: 06-Jul-2021
C-O-C number	: ----	Issue Date	: 08-Jul-2021 14:54
Sampler	: MICHAEL MERCER		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, 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.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- 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.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP080: 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, 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.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.

- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration. 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	TRIP08_210702	----	----	----	----
			Sampling date / time	05-Jul-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2124885-003	--------	--------	--------	--------
				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**24.0**	----	----	----	----
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	**598**	----	----	----	----
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	**6**	----	----	----	----
Copper	7440-50-8	5	mg/kg	**15**	----	----	----	----
Lead	7439-92-1	5	mg/kg	**61**	----	----	----	----
Nickel	7440-02-0	2	mg/kg	<2	----	----	----	----
Zinc	7440-66-6	5	mg/kg	**154**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.2**	----	----	----	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	----	----	----	----
Tetrachloroethene	127-18-4	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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TRIP08_210702	----	----	----	----
			Sampling date / time	05-Jul-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2124885-003	--------	--------	--------	--------
				Result	----	----	----	----
EP075(SIM)A: Phenolic Compounds - Continued								
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**	----	----	----	----
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	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP08_210702	----	----	----	----
				Sampling date / time	05-Jul-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2124885-003	--------	--------	--------	--------
					Result	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP08_210702	----	----	----	----
				Sampling date / time	05-Jul-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2124885-003	--------	--------	--------	--------
					Result	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	----	----	----	----
EP231P: PFAS Sums									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP08_210702	----	----	----	----
				Sampling date / time	05-Jul-2021 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2124885-003	--------	--------	--------	--------
					Result	----	----	----	----
EP231P: PFAS Sums - Continued									
Sum of PFAS	----	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		<0.0002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		<0.0002	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		85.8	----	----	----	----
Toluene-D8	2037-26-5	0.5	%		94.7	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		85.9	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		81.2	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		90.8	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		55.2	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		98.1	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		97.3	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		89.3	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		84.2	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		92.0	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		82.3	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.0002	%		98.5	----	----	----	----
13C8-PFOA	----	0.0002	%		106	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	20210705_T01	20210705_T02	----	----	----
			Sampling date / time	05-Jul-2021 00:00	05-Jul-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2124885-001	ES2124885-002	--------	--------	--------
				Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	**0.015**	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L	**0.003**	----	----	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L	**0.004**	----	----	----	----
Zinc	7440-66-6	0.005	mg/L	**0.820**	----	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	----	----	----
EG050T: Total Hexavalent Chromium								
Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	----	----	----	----
EP074E: Halogenated Aliphatic Compounds								
Trichloroethene	79-01-6	5	µg/L	<5	----	----	----	----
Tetrachloroethene	127-18-4	5	µg/L	<5	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1.0	µg/L	<1.0	----	----	----	----
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	----	----	----	----
Acenaphthene	83-32-9	1.0	µg/L	<1.0	----	----	----	----
Fluorene	86-73-7	1.0	µg/L	<1.0	----	----	----	----
Phenanthrene	85-01-8	1.0	µg/L	<1.0	----	----	----	----
Anthracene	120-12-7	1.0	µg/L	<1.0	----	----	----	----
Fluoranthene	206-44-0	1.0	µg/L	<1.0	----	----	----	----
Pyrene	129-00-0	1.0	µg/L	<1.0	----	----	----	----
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	----	----	----	----
Chrysene	218-01-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1.0	µg/L	<1.0	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	1.0	µg/L	<1.0	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	1.0	µg/L	<1.0	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	20210705_T01	20210705_T02	----	----	----
			Sampling date / time	05-Jul-2021 00:00	05-Jul-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2124885-001	ES2124885-002	--------	--------	--------
				Result	Result	----	----	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	20	µg/L	<20	----	----	----	----
C10 - C14 Fraction	----	50	µg/L	<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L	<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L	<50	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	µg/L	<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	20	µg/L	<20	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	----	----	----	----
>C10 - C16 Fraction	----	100	µg/L	<100	----	----	----	----
>C16 - C34 Fraction	----	100	µg/L	<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L	<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	100	µg/L	<100	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	100	µg/L	<100	----	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	----	----	----	----
Toluene	108-88-3	2	µg/L	<2	----	----	----	----
Ethylbenzene	100-41-4	2	µg/L	<2	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	----	----	----	----
ortho-Xylene	95-47-6	2	µg/L	<2	----	----	----	----
^ Total Xylenes	----	2	µg/L	<2	----	----	----	----
^ Sum of BTEX	----	1	µg/L	<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L	<5	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	**0.03**	**0.03**	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	**0.02**	**0.02**	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	20210705_T01	20210705_T02	----	----	----
			Sampling date / time	05-Jul-2021 00:00	05-Jul-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2124885-001	ES2124885-002	--------	--------	--------
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	**0.02**	**0.06**	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	**0.02**	**0.05**	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	**0.03**	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	**0.01**	**0.02**	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	20210705_T01	20210705_T02	----	----	----
				Sampling date / time	05-Jul-2021 00:00	05-Jul-2021 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2124885-001	ES2124885-002	--------	--------	--------
					Result	Result	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		**0.10**	**0.21**	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		**0.05**	**0.05**	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		**0.10**	**0.21**	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	5	%		**100.0**	----	----	----	----
Toluene-D8	2037-26-5	5	%		**107**	----	----	----	----
4-Bromofluorobenzene	460-00-4	5	%		**102**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**29.7**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	1.0	%		**66.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**59.5**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**69.6**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**69.1**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**94.3**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**103**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**110**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**119**	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.02	%		**103**	**95.0**	----	----	----
13C8-PFOA	----	0.02	%		**100**	**95.5**	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TRIP08_210702 - 05-Jul-2021 00:00	Soil sample.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	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

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	78	133
Toluene-D8	2037-26-5	79	129
4-Bromofluorobenzene	460-00-4	81	124
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2.4.6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128
EP231S: PFAS Surrogate			

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP231S: PFAS Surrogate - Continued			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

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

ALS Environmental

QUALITY CONTROL REPORT

Work Order	: **ES2124885**	Page	: 1 of 17
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Contact	: Monica Wright
Address	: LEVEL 1 45 WATT STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 06-Jul-2021
Order number	: ----	Date Analysis Commenced	: 06-Jul-2021
C-O-C number	: ----	Issue Date	: 08-Jul-2021
Sampler	: MICHAEL MERCER		
Site	: ----		
Quote number	: EN/114/20		
No. of samples received	: 6		
No. of samples analysed	: 3		

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

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

This Quality Control Report contains the following information:

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, 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	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3777149)									
ES2124885-003	TRIP08_210702	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	6	5	24.1	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	15	17	12.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	61	68	10.5	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	154	149	2.9	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3777148)									
ES2124885-003	TRIP08_210702	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3777554)									
ES2124883-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	1.9	1.9	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3777205)									
ES2124435-001	Anonymous	EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3777185)									
ES2124885-003	TRIP08_210702	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 3777185) - continued									
ES2124885-003	TRIP08_210702	EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3777185)									
ES2124885-003	TRIP08_210702	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3777186)									
ES2124885-003	TRIP08_210702	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3777204)									
ES2124883-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2124435-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3777186)									
ES2124885-003	TRIP08_210702	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3777204)									
ES2124883-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2124435-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 3777204)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 3777204) - continued									
ES2124883-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2124435-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3777109)									
ES2124125-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3777109)									
ES2124125-003	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3777109)									
ES2124125-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3777109) - continued									
ES2124125-003	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3777109)									
ES2124125-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020F: Dissolved Metals by ICP-MS (QC Lot: 3777099)									
ES2124927-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.022	0.022	0.0	0% - 20%
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.008	0.008	0.0	No Limit
EG035F: Dissolved Mercury by FIMS (QC Lot: 3777100)									
ES2124926-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EG050T: Total Hexavalent Chromium (QC Lot: 3777435)									
CA2104149-001	Anonymous	EG050G-T: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.05	<0.05	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 3777122)									
ES2124828-001	Anonymous	EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3777121)									
ES2124828-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3777121)									
ES2124828-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3777121)									

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 3777121) - continued									
ES2124828-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 3777119)									
ES2124885-001	20210705_T01	EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	0.03	0.04	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 3777119)									
ES2124885-001	20210705_T01	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 3777119)									
ES2124885-001	20210705_T01	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 3777119)									
ES2124885-001	20210705_T01	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 3777119)									
ES2124885-001	20210705_T01	EP231X: Sum of PFAS	----	0.01	µg/L	0.10	0.13	26.1	0% - 50%

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3777149)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	113	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	98.6	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	124	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	111	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	96.0	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	112	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	104	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3777148)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	100	70.0	125
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3777554)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	106	68.0	114
EP074E: Halogenated Aliphatic Compounds (QCLot: 3777205)								
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	94.2	70.0	118
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	92.3	67.0	143
EP075(SIM)A: Phenolic Compounds (QCLot: 3777185)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	94.0	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	98.0	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	93.6	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	97.0	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	82.2	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	98.5	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	94.9	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	95.9	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	94.6	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.7	54.0	114
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	92.6	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	24.9	10.0	57.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3777185)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	91.4	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	89.4	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	98.6	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	92.5	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	94.3	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	98.7	77.0	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3777185) - continued								
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	95.8	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	94.0	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	100.0	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	96.2	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	93.3	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	93.7	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	98.8	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	94.0	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	78.6	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	91.5	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777186)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	92.9	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	89.9	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	95.6	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777204)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	101	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777186)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	80.7	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	91.9	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	100	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777204)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	102	68.4	128
EP080: BTEXN (QCLot: 3777204)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	99.9	62.0	116
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	96.0	67.0	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	95.0	65.0	117
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	93.5	66.0	118
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	93.7	68.0	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.1	63.0	119
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3777109)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	75.2	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	75.2	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	73.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.0	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	75.2	68.0	136
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.0	59.0	134

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3777109)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	82.7	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.0	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	82.4	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.6	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	80.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.2	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.4	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	85.9	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3777109)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	90.7	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	86.4	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.0	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	91.0	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.2	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.0	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3777109)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	86.0	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	78.4	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	78.4	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	86.8	69.2	143

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3777099)								
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	98.8	85.0	114
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	95.8	84.0	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	91.5	85.0	111
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.3	81.0	111
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	93.3	83.0	111
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	96.7	82.0	112

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3777099) - continued								
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	94.3	81.0	117
EG035F: Dissolved Mercury by FIMS (QCLot: 3777100)								
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	92.8	83.0	105
EG050T: Total Hexavalent Chromium (QCLot: 3777435)								
EG050G-T: Hexavalent Chromium	18540-29-9	0.01	mg/L	<0.01	0.05 mg/L	101	87.0	113
EP074E: Halogenated Aliphatic Compounds (QCLot: 3777122)								
EP074: Trichloroethene	79-01-6	5	µg/L	<5	10 µg/L	97.2	76.0	118
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	10 µg/L	98.2	72.0	124
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3777250)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	65.6	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	66.2	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	68.0	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	71.4	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	91.5	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	77.1	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	80.3	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	76.7	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	80.7	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	85.1	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	72.4	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	73.1	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	85.2	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	91.4	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	93.8	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	82.7	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777121)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	86.5	75.0	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777251)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	86.3	55.8	112
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	75.8	71.6	113
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	74.4	56.0	121
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777121)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	90.8	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777251)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	91.5	57.9	119
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	82.1	62.5	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	98.2	61.5	121

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 3777121)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	86.4	70.0	122
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	99.1	69.0	123
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	100	70.0	120
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	102	69.0	121
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	109	72.0	122
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	102	70.0	120
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3777119)								
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	114	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	101	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.02	µg/L	<0.02	0.25 µg/L	100	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	120	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	114	65.0	140
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	126	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3777119)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	106	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	127	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	125	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	120	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	127	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	129	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	120	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	121	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	127	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	114	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	107	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3777119)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	124	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	129	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	107	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	124	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	128	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	122	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	122	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3777119)								

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3777119) - continued								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	124	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	127	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	106	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	108	71.4	144

Matrix Spike (MS) Report

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

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 3777149)							
ES2124885-003	TRIP08_210702	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	104	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	102	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	98.0	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	94.1	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	107	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3777148)							
ES2124885-003	TRIP08_210702	EG035T: Mercury	7439-97-6	5 mg/kg	110	70.0	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3777554)							
ES2124883-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	# Not Determined	70.0	130
ES2124883-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	# Not Determined	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3777205)							
ES2124435-001	Anonymous	EP074: Trichloroethene	79-01-6	2.5 mg/kg	96.1	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 3777185)							
ES2124885-003	TRIP08_210702	EP075(SIM): Phenol	108-95-2	10 mg/kg	85.1	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	93.4	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	84.4	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	88.8	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	57.8	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3777185)							
ES2124885-003	TRIP08_210702	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.9	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3777185) - continued							
ES2124885-003	TRIP08_210702	EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777186)							
ES2124885-003	TRIP08_210702	EP071: C10 - C14 Fraction	----	480 mg/kg	106	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	107	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	115	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777204)							
ES2124435-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	96.9	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777186)							
ES2124885-003	TRIP08_210702	EP071: >C10 - C16 Fraction	----	860 mg/kg	106	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	114	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	93.0	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777204)							
ES2124435-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	97.4	70.0	130
EP080: BTEXN (QCLot: 3777204)							
ES2124435-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	86.3	70.0	130
		EP080: Toluene	108-88-3	2.5 mg/kg	86.2	70.0	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	89.0	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	85.0	70.0	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	86.8	70.0	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	76.5	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3777109)							
ES2124125-003	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	77.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	74.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	74.8	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	78.4	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	72.4	68.0	136
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	75.2	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3777109)							
ES2124125-003	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	85.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	79.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	83.2	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	83.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	82.8	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	90.0	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	86.8	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	91.6	64.0	136

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3777109) - continued							
ES2124125-003	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	90.0	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	94.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	85.7	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3777109)							
ES2124125-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	87.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	94.9	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	79.6	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	92.0	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	84.9	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	84.8	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	76.8	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3777109)							
ES2124125-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	83.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	82.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	78.4	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	76.0	69.2	143

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020F: Dissolved Metals by ICP-MS (QCLot: 3777099)							
ES2124928-001	Anonymous	EG020A-F: Arsenic	7440-38-2	1 mg/L	97.6	70.0	130
		EG020A-F: Cadmium	7440-43-9	0.25 mg/L	95.6	70.0	130
		EG020A-F: Chromium	7440-47-3	1 mg/L	84.6	70.0	130
		EG020A-F: Copper	7440-50-8	1 mg/L	95.1	70.0	130
		EG020A-F: Lead	7439-92-1	1 mg/L	87.4	70.0	130
		EG020A-F: Nickel	7440-02-0	1 mg/L	95.7	70.0	130
		EG020A-F: Zinc	7440-66-6	1 mg/L	97.4	70.0	130
EG035F: Dissolved Mercury by FIMS (QCLot: 3777100)							
ES2124885-001	20210705_T01	EG035F: Mercury	7439-97-6	0.01 mg/L	96.5	70.0	130
EG050T: Total Hexavalent Chromium (QCLot: 3777435)							
CA2104149-001	Anonymous	EG050G-T: Hexavalent Chromium	18540-29-9	0.25 mg/L	76.9	70.0	130
EP074E: Halogenated Aliphatic Compounds (QCLot: 3777122)							

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 3777122) - continued							
ES2124828-001	Anonymous	EP074: Trichloroethene	79-01-6	25 µg/L	80.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3777121)							
ES2124828-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	113	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3777121)							
ES2124828-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	112	70.0	130
EP080: BTEXN (QCLot: 3777121)							
ES2124828-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	95.9	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	103	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	106	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	105	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	108	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	99.2	70.0	130
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 3777119)							
ES2124912-002	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	103	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	101	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	107	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	116	65.0	140
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	118	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 3777119)							
ES2124912-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	102	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	124	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	118	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	115	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	127	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	121	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	112	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	118	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	127	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	109	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	99.0	71.0	132
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3777119)							
ES2124912-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	117	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	115	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	100	62.6	147

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 3777119) - continued							
ES2124912-002	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	115	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	118	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	126	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 3777119)							
ES2124912-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	121	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	116	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	111	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	117	71.4	144

ALS Environmental

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2124885**	Page	: 1 of 10
Client	: **ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)**	Laboratory	: Environmental Division Sydney
Contact	: MR IAN BATTERLEY	Telephone	: +61-2-8784 8555
Project	: Unicorn	Date Samples Received	: 06-Jul-2021
Site	: ----	Issue Date	: 08-Jul-2021
Sampler	: MICHAEL MERCER	No. of samples received	: 6
Order number	: ----	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO Method Blank value outliers occur.**
- **NO Duplicate outliers occur.**
- **NO Laboratory Control outliers occur.**
- **Matrix Spike 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
Matrix Spike (MS) Recoveries							
EG048: Hexavalent Chromium (Alkaline Digest)	ES2124883--002	Anonymous	**Hexavalent Chromium**	18540-29-9	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**
EG048: Hexavalent Chromium (Alkaline Digest)	ES2124883--002	Anonymous	**Hexavalent Chromium**	18540-29-9	Not Determined	----	**MS recovery not determined, background level greater than or equal to 4x spike level.**

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

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

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

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

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

Matrix: **SOIL**

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

Method / *Container* / Client Sample ID(s)	*Sample Date*	*Extraction / Preparation*			*Analysis*		
		Date extracted	*Due for extraction*	*Evaluation*	*Date analysed*	*Due for analysis*	*Evaluation*
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
TRIP08_210702	**05-Jul-2021**	**----**	----	----	**06-Jul-2021**	19-Jul-2021	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag (EA200)							
TRIP08_210702	**05-Jul-2021**	**----**	----	----	**07-Jul-2021**	01-Jan-2022	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓

Matrix: **SOIL**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	02-Aug-2021	✓	**07-Jul-2021**	02-Aug-2021	✓
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G)							
TRIP08_210702	**05-Jul-2021**	**07-Jul-2021**	02-Aug-2021	✓	**07-Jul-2021**	14-Jul-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Soil Glass Jar - Unpreserved (EP074)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	12-Jul-2021	✓	**06-Jul-2021**	12-Jul-2021	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**07-Jul-2021**	15-Aug-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**07-Jul-2021**	15-Aug-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**07-Jul-2021**	15-Aug-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
Soil Glass Jar - Unpreserved (EP071)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**07-Jul-2021**	15-Aug-2021	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	15-Aug-2021	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	15-Aug-2021	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	15-Aug-2021	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	15-Aug-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
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X)							
TRIP08_210702	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	15-Aug-2021	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020F: Dissolved Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG020A-F)							
20210705_T01	**05-Jul-2021**	**----**	----	----	**06-Jul-2021**	01-Jan-2022	✓
EG035F: Dissolved Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Filtered (EG035F)							
20210705_T01	**05-Jul-2021**	**----**	----	----	**07-Jul-2021**	02-Aug-2021	✓
EG050T: Total Hexavalent Chromium							
Clear Plastic Bottle - NaOH (EG050G-T)							
20210705_T01	**05-Jul-2021**	**----**	----	----	**07-Jul-2021**	02-Aug-2021	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial - Sulfuric Acid (EP074)							
20210705_T01	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
20210705_T01	**05-Jul-2021**	**07-Jul-2021**	12-Jul-2021	✓	**07-Jul-2021**	16-Aug-2021	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
20210705_T01	**05-Jul-2021**	**07-Jul-2021**	12-Jul-2021	✓	**07-Jul-2021**	16-Aug-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
20210705_T01	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
20210705_T01	**05-Jul-2021**	**07-Jul-2021**	12-Jul-2021	✓	**07-Jul-2021**	16-Aug-2021	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
20210705_T01	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
20210705_T01	**05-Jul-2021**	**06-Jul-2021**	19-Jul-2021	✓	**06-Jul-2021**	19-Jul-2021	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
20210705_T01, 20210705_T02	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X)							
20210705_T01, 20210705_T02	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓

Matrix: **WATER**

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

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X)							
20210705_T01, 20210705_T02	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X)							
20210705_T01, 20210705_T02	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X)							
20210705_T01, 20210705_T02	**05-Jul-2021**	**06-Jul-2021**	01-Jan-2022	✓	**07-Jul-2021**	01-Jan-2022	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	6	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	6	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	1	**100.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	11	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Volatile Organic Compounds	EP074	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

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

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**0.00**	**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	9	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**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	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**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	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**0.00**	**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	9	**11.11**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

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

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
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)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
Volatile Organic Compounds	EP074	SOIL	In house: Referenced to USEPA SW 846 - 8260 Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
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.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. Samples are 0.45µm filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	In house: Referenced to AS 3550, APHA 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) Samples are 0.45µm filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Hexavalent Chromium by Discrete Analyser - Total	EG050G-T	WATER	In house: Referenced to APHA 3500 Cr-A & B. Hexavalent chromium is determined directly on water sample by Descrete Analyser as received by pH adjustment and colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
Volatile Organic Compounds	EP074	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by Solid Phase Extraction (SPE) followed by LC-Electrospray-MS-MS, Negative Mode using MRM and internal standard quantitation. Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is 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
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.
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).

Preparation Methods	Method	Matrix	Method Descriptions
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
QuECheRS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Separatory Funnel Extraction of Liquids	ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

CHAIN OF CUSTODY RECORD

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Company	ERM	Project No	
Address	Level 1- 45 Watt Street Newcastle NSW 2300	Project Name	UNICORN
Contact Name	Michael Mercer	Project Manager	Ian Batterley
Phone No	439923103	EDD Format (ESdat, EQuIS, Custom)	Esdat/ EQUIS
Special Directions		Sampler(s)	Michael Mercer
Purchase Order		Handed over by	Michael Mercer
Quote ID No	210615ERMN	Email for Invoice	Ian.batterley@erm.com
		Email for Results	Ian.batterley@erm.com and michael.mercer@erm.com and anthony.richard@erm.com

Analyses (Note: Where metals are requested, if more specify Total or Dissolved. If not specified, Total will be reported)

Containers: 1L Plastic; 250mL Plastic; 125mL Plastic; 200mL Amber Glass; 40mL VOA vial; 500mL PFAS (Methanol); 4oz. Glass jar HDPE; Other (Asbestos AS4964, WA Sandplain)

Turnaround Time (TAT) Requirements (prior arrangement may be required)
☐ Overnight (5am)* ☐ 1 Day* ☐ 2 Day* ☐ 3 Day* ☐ 5 Day
* Surcharges apply
☐ Other ( )

No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix (Solid (S) Water (W))	HOLD	PFAS (Extended Suite - Standard Level)	B7	B7A	SVV (Including trichloroethylene (TCE)) and tetrachloroethene (PCE))	Hexavalent Chromium	ACM ID in Soil	SPOCAS	B1	BTEXN	~ AOM	Sample Comments / Dangerous Goods Hazard Warning
1	GW216	5/07/21	W		X	X		X	X						
2	GW219	5/07/21	W		X	X		X	X						
3	GW222	5/07/21	W		X	X		X	X						
4	GW223	5/07/21	W		X	X		X	X						
5	GW225	5/07/21	W		X	X		X	X						
6	GW228	5/07/21	W		X	X		X	X						
7	20210705_D01	5/07/21	W		X	X		X	X						
8 (1)	20210705_T01	5/07/21	W		X	X		X	X						
9	20210705_D02	5/07/21	W		X										FORWARD TO ALS (DUP)
10 (2)	20210705_T02	5/07/21	W		X										
11	TS		S										X		FORWARD TO ALS (DUP)
12	TB		S									X			
13	BH208_0.3	5/07/21	S		X		X	X	X	X					
14	BH208_1.2	5/07/21	S		X		X	X	X	X					
15	BH209_0.1	5/07/21	S	X											
16	BH209_0.2	5/07/21	S		X		X	X	X	X					
17	BH209_0.7	5/07/21	S	X											
18	BH209_1.4	5/07/21	S		X		X	X	X	X					
19	BH231_0.1	5/07/21	S		X		X	X	X	X					
20	BH234_0.1	5/07/21	S		X		X	X	X	X					
21	BH234_0.4	5/07/21	S		X		X	X	X	X					
22	HS240_0.05	5/07/21	S		X										
23	HS241_0.05	5/07/21	S		X										
24	DUP08_210702	5/07/21	S		X		X	X	X	X					
25 (3)	TRIP08_210702	5/07/21	S		X		X	X	X	X					
26	HS242_0.05	5/07/21	S		X										FORWARD TO ALS (DUP)
27	HS243_0.05	5/07/21	S		X										
28	HS244_0.02	5/07/21	S		X										
29	SW245	5/07/21	S		X										
30	SW248	5/07/21	S		X										
31	SED246	5/07/21	S		X		X	X	X	X					
32 (4)	SW_Frag SNR	5/07/21	S											X	
33	SED247	5/07/21	S		X		X	X	X	X					FORWARD TO ALS (DUP)
34 (5)	SED248 SNR	5/07/21	S		X		X	X	X	X					
35	SED249	5/07/21	S		X		X	X	X	X					FORWARD TO ALS (DUP)
36 (6A)	SED250 SNR	5/07/21	S		X		X	X	X	X					
37	SW250	5/07/21	S		X										FORWARD TO ALS (DUP)
38	SED250	5/07/21	S		X		X	X	X	X					
	Total Counts		2	#	#		#	#	#		#	#	#		

Newcastle

TAT

Environmental Division
Sydney
Work Order Reference
ES2124885

Telephone : +61-2-8784 8555

FC: Fax 6/7/21 3pm

Method of Shipment						
☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	michael mercer	Signature	Date 25/06/21 Time

Relinquished by: Emma Thompson

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

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

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APPENDIX G QAQC ASSESSMENT

F1. 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 F1. Presents the degree of QA/QC pertinent to the field investigations.

Table F1: Field QA/QC Assessment

QA/QC Criterion	Comments
QA/QC program including duplicate samples.	In order to demonstrate the suitability of the soil samples and water samples analysed, field quality control samples were collected throughout the soil and water investigation scope. Out of the 79 primary soil samples, four inter laboratory duplicate and eight intra laboratory duplicate soil sample were collected as a part of this investigation. This was deemed sufficient as the intra-laboratory duplicate sample rate was 1/7, which complies with NEPM (2013) of 1/10 for PFAS samples. The inter-laboratory duplicates had a sample ratio of 1/20, which complies with the 1/20 for the inter-laboratory duplicates as per the NEPM (2013) and the SAQP (ERM, 2021). Out of the 23 primary water samples three intra laboratory duplicates and three inter laboratory duplicates were collected as a part of this investigation. This was deemed sufficient as the ratio was 1/8, which complies with NEPM (2013) of 1/10 for PFAS samples. Duplicate pair samples RPD's were generally within an acceptable range and are presented in *Table F4* (soil) and *Table F5* (water)*, Appendix F.* It is considered that, overall, the outlying RPD results are likely due to the natural variability within the materials sampled, or the low concentrations reported in relation to the LOR.
Equipment calibration	All field equipment used was operated under the appropriate technical procedures and calibrated prior to use in accordance with the manufacturer's specifications. Relevant calibration records are provided in *Appendix D.*
Appropriate decontamination procedures were adopted.	Decontamination procedures were implemented between collecting samples in accordance with ERM SOPs. Soil samples were collected directly from hand augers and from the drill rig cuttings. Sediment samples we sampled using grab methods. Groundwater samples were collected using low flow peristaltic pump. All non-dedicated sampling equipment was decontaminated between sampling locations where designated disposable materials are not used. Where possible, decontamination procedures were generally as follows: ■ Washed in potable (tap) water and brush scrubbing using tap water and a non-phosphate detergent (Decon 90®); ■ Rinsed with potable water; ■ Rinsed with deionised water; and ■ Air dried. Three groundwater rinsate blank samples were collected from sampling equipment to demonstrate the efficacy of the decontamination procedures. The results of the rinsate blank samples are presented in *Table F6, Appendix F*. The samples were analysed by primary laboratory (ALS), with laboratory documents provided in *Appendix E*. Concentrations of all analytes for the water investigation was reported below the laboratory limits of reporting (LORs), with the exception of 20210713-R01, which reported minor detections for various metals and chlorinated hydrocarbons. This rinsate sample was taken from the drillers auger prior to beginning the investigation. It was the only

QA/QC Criterion	Comments
	sample within the investigation to report a detection above LOR for chlorinated hydrocarbons, therefore deemed not to have influenced the results through cross contamination. Furthermore, none of the samples taken whilst using that drill rig (GW252-GW254) reported any exceedances for any metals, further suggesting that the minor detections did not impact the outcomes of this investigation.
All relevant media assessed	A large variety of media was sampled in order to best represent any potential impacts across the site. Groundwater, surface water, sediment, soil and concrete was tested for CoPC's The media sampled is considered relevant and appropriate for the purposes of this assessment.
Appropriateness of sampling strategy	All 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 the SAQP (ERM, 2021), ERM's Standard Operating Procedures and the relevant guidelines.
Trip blank and trip spikes collected	Six pairs of trip blank and spike samples were inserted into the cooler box, in which all samples were also transported. All blank and spike results reported by the laboratory are within their desired range. The sample handling techniques and laboratory confirmation of appropriate sample handling is considered to be appropriate for this investigation. Trip spike and blank summaries are presented in *Table F7, Appendix F*.
Sample collection, handling and transportation procedures.	Sample containers were labelled and placed on ice immediately after collection. Sample labelling included a unique sample identifier, project code, sampler, time and date. Samples were all received and extracted within the recommended holding times for analysis. Samples were dropped off directly to the laboratory or picked up by courier. All samples were shipped in insulated cooler boxes under chain of custody documentation to the laboratory for analysis. Sample receipt documentation provided in *Appendix E* reports that samples were received in good condition. All sample receipts comment that an attempt to chill was evident, with the exception of 806169. Chain of custody documentation is also provided within *Appendix E*.
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 as per the SAQP (ERM, 2021), and the NEPM (2013).

Table F2 presents the degree of QA/QC pertinent to the laboratory program.

Table F2: 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 and available in *Appendix E.* Laboratory control spikes, surrogates and matrix spikes were acceptable, with limited non-conformances recorded.

Table F3. 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 F3: Overall Sampling and Analysis Methodology Assessment

Field Considerations	Laboratory Considerations
Precision Requirements	
The sampling was conducted following the ERM SAQP and ERM SOP's, with any variations from these procedures documented.	Analysis of the following were reported: ■ Laboratory duplicates; and ■ Field inter-laboratory and intra-laboratory duplicates. ■ Rinsate samples
Precision Comments	
No significant variations from ERM's SOPs were noted.	
Accuracy Requirements	
It is considered that appropriate media has been sampled as a part of this assessment. The sampling was conducted following the ERM SOP's and the SAQP and any variations from these procedures were documented.	Analysis of the following were reported where applicable: ■ Method blanks; ■ Laboratory duplicates; ■ Detection limits; ■ Matrix spikes; ■ Surrogate recovery; and ■ Quality control sample frequency.
Accuracy Comments	
No significant variations from ERM's SOPs were noted. Laboratory QA/QC samples were generally reported within the acceptance limits specified in the laboratory reports. While laboratory QA/QC outliers are reported it is considered that 95% of data satisfy the DQIs.	
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, with minor variations mentioned in the body of the report.
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 water conditions at the site.	

Field Considerations	Laboratory Considerations
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	
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 proposal. Appropriate analysis methods and laboratory LORs were used. Sample documentation was provided. Sample holding times were all 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.	

Field Duplicates (SOIL)		Lab Report Number	807316	807316		807316	807316		808027	808027		808299	808299		810797	810797		806169	806169		806169	806169		806169	806169		806169	ES2123913		806169	ES2123913		808027	ES2124585	
		Field ID	GW230_0.6	DUP04_210628	RPD	GW235_0.5	DUP05_210630	RPD	BH209_1.4	DUP08_210702	RPD	BH215_0.4	DUP06_210701	RPD	BH252-2.0	20210713-D01	RPD	SP239_0.7	Dup01_210622	RPD	TP212_0.7	Dup02_210623	RPD	TP221_1.0	Dup03_210624	RPD	SP239_0.7	Trip01_210622	RPD	TP212_0.7	Trip02_210623	RPD	BH209_1.4	TRIP08_210702	RPD
		Sampled Date/Time	28/06/2021	28/06/2021		30/06/2021	30/06/2021		5/07/2021	5/07/2021		5/07/2021	5/07/2021		13/07/2021	13/07/2021		22/06/2021	22/06/2021		23/06/2021	23/06/2021		24/06/2021	24/06/2021		22/06/2021	22/06/2021		23/06/2021	23/06/2021		5/07/2021	5/07/2021	
Chem_Grp	ChemName	Units	EQL																															
	Approximate Sample Mass	g		581.0	476.0	20	771.0	744.0	4	733.0	601.0	20	654.0	731.0	11	463.0	488.0	5																	
	FA - Comment	Comment		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		
	Organic Fibres - Comment	Comment		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		
	Respirable Fibres - Comment	Comment		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		
	Synthetic Fibres - Comment	Comment		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		
PFOS/PFO	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/kg	5 (Primary); 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/kg	5 (Primary); 0.5 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.5	0	<5.0	<0.5	0	<5.0	<0.5	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/kg	10 (Primary); 0.2 (Interlab)	<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	0	<10.0	<10.0	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/kg	10 (Primary); 0.2 (Interlab)	<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	0	<10.0	<10.0	0	<10.0	<0.2	0	<10.0	<0.2	0	<10.0	<0.2	0
	N-Methylperfluorooctanesulfonamidoethanol	mg/kg	0.005 (Primary); 0.0005 (Interlab)	<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	<0.005	<0.005	0	<0.005	<0.0005	0	<0.005	<0.0005	0	<0.005	<0.0005	0
	Perfluorobutanoic acid (PFBA)	µg/kg	5 (Primary); 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0	<5.0	<1.0	0	<5.0	<1.0	0
	Perfluorobutanesulfonic acid (PFBS)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluoroheptanoic acid (PFHpA)	µg/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	<5.0			<5.0			<5.0		
	Perfluorohexanesulfonic acid (PFHxS)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluorohexanoic acid (PFHxA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluorononanoic acid (PFNA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluorooctane sulfonamide (PFOSA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluorooctanesulfonic acid (PFTeDA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluorotridecanoic acid (PFTrDA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	Perfluoroundecanoic acid (PFUnDA)	µg/kg	5 (Primary); 0.2 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<0.2	0	<5.0	<0.2	0	<5.0	<0.2	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.005 (Primary); 0.0005 (Interlab)	<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	<0.005	<0.005	0	<0.005	<0.0005	0	<0.005	<0.0005	0	<0.005	<0.0005	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.01 (Primary); 0.0005 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0				<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.01	0	<0.01	<0.0005	0	<0.01	<0.0005	0	<0.01	<0.0005	0
	Perfluorooctanesulfonic acid (PFOA)	mg/kg	0.005 (Primary); 0.0002 (Interlab)	<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	<0.005	<0.005	0	<0.005	<0.0002	0	<0.005	<0.0002	0	<0.005	<0.0002	0
3A																																				
Phenols	2,3,4,5-Tetrachlorophenol	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<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	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0	<0.5	0
	2,4,6-Trichlorophenol	mg/kg	1							<2.0	<2.0	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	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0	<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	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0
	2,4-Dimethylphenol	mg/kg	0.5	<0.5	<0.5	0	<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	<0.5	<0.5	0	<0.5			<0.5			<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	<10.0	<10.0	0	<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	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0
	2-Chlorophenol	mg/kg	0.5	<0.5	<0.5	0	<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	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0
	2-Methylphenol	mg/kg	0.2							<1.0	<1.0	0																								
	2-Methylphenol	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	<0.2	0	<0.2	<0.2	0	<0.2			<0.2			<0.2	<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	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0	<0.5	0
	2-Nitrophenol	mg/kg	1							<2.0	<2.0	0																								
	4,6-Dinitro-2-methylphenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<10.0	<10.0	0	<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		
	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	<26.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
	4-chloro-3-ethylphenol	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	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0	<0.5	0
	4-chloro-3-methylphenol	mg/kg	1							<2.0	<2.0	0																								
	4-Nitrophenol	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<5.0	0	<10.0	<10.0	0	<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		
	Cresol 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	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	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	<1.0			<1.0			<1.0	<2.0	0
	Pentachlorophenol	mg/kg	1							<2.0	<2.0	0																								
	Tetrachlorophenols	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	0	<10.0	<10.0	0	<10.0	<10.0	0	<10.0			<10.0			<10.0		
	Phenol	mg/kg	0.5	<0.5	<0.5	0	<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	<0.5	<0.5	0	<0.5			<0.5			<0.5	<0.5	0
	Phenols (Total Halogenated)	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	<1.0			<1.0			<1.0		
	Phenols (Total Non Halogenated)	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	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
Amino Alip	N-nitrosodi-n-butylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	N-nitrosodi-n-propylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
natics																																				
Amino Arol	1-naphthylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0			<1.0			<0.5		
	2-naphthylamine	mg/kg	0.5	<1.0	<1.0	0	<1.0	<1.0	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<1.0	0	<1.0			<1.0			<0.5		
	Diphenylamine	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
matics																																				
Anilines	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	<1.0	<1.0	0	<1.0			<1.0			<1.0		
	Aniline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.3	0	<1.0	<1.0	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Asbestos	ACM - Comment	Comment		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		
	AF - Comment	Comment		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		
	Asbestos from ACM in Soil	%w/w		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		
	Asbestos from FA & AF in Soil	%w/w		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		
	Asbestos Reported Result	Comment		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		
	Mass ACM	g		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		
	Mass AF	g		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		
	Mass Asbestos in ACM	g		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		
	Mass asbestos in AF	g		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		
	Mass Asbestos in FA	g		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		
	Mass Asbestos in FA & AF	g		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		
	Mass FA	g		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		
TRH	C6-C10	mg/kg	20 (Primary); 10 (Interlab)	<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	<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
	C6-C10 (F1 minus BTEX)	mg/kg	20 (Primary); 10 (Interlab)	<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	<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	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	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0
	C10-C16 (F2 minus Naphthalene)	mg/kg	50	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<50.0	0	<50.0	<500.0	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	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	**830.0**	**1600.0**	**167**	<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	<100.0	0	<100.0	<100.0	0
	C34-C40	mg/kg	100	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	**<100.0**	**620.0**	**144**	<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	<100.0	0	<100.0	<100.0	0
	C10-C40 (Sum of total)	mg/kg	100 (Primary); 50 (Interlab)	<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0	**1430.0**	**2820.0**	**174**	<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
BTEX	Benzene	mg/kg	0.1 (Primary); 0.2 (Interlab)	<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	<0.1	<0.2	0	<0.1	<0.2	0	<0.1	<0.2	0
	Toluene	mg/kg	0.1 (Primary); 0.5 (Interlab)	**0.2**	**<0.1**	**67**	<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	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
	Ethylbenzene	mg/kg	0.1 (Primary); 0.5 (Interlab)	<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	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
	Xylene (m- & p)	mg/kg	0.2 (Primary); 0.5 (Interlab)	**0.3**	**<0.2**	**40**	<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	<0.2	<0.5	0	<0.2	<0.5	0	<0.2	<0.5	0
	Xylene (o)	mg/kg	0.1 (Primary); 0.5 (Interlab)	<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	<0.1	<0.5	0	<0.1	<0.5	0	<0.1	<0.5	0
	Xylene Total	mg/kg	0.3 (Primary); 0.5 (Interlab)	<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	<0.3	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
Chlorinated	Chlorinated hydrocarbons EPAVic	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	<0.5			<0.5			<0.5		
	Other chlorinated hydrocarbons EPAVic	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	<0.5			<0.5			<0.5		
	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	<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	<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

Field Duplicates (SOIL)			Lab Report Number	807316	807316		807316	807316		808027	808027		808299	808299		810797	810797		806169	806169		806169	806169		806169	806169		806169	ES2123913		806169	ES2123913		808027	ES2124585	
			Field ID	GW230_0.6	DUP04_210628	RPD	GW235_0.5	DUP05_210630	RPD	BH209_1.4	DUP08_210702	RPD	BH215_0.4	DUP06_210701	RPD	BH252-0.2	20210713-D01	RPD	SP239_0.7	Dup01_210622	RPD	TP212_0.7	Dup02_210623	RPD	TP221_1.0	Dup03_210624	RPD	SP239_0.7	Trip01_210622	RPD	TP212_0.7	Trip02_210623	RPD	BH209_1.4	TRIP08_210702	RPD
			Sampled Date/Time	28/06/2021	28/06/2021		30/06/2021	30/06/2021		5/07/2021	5/07/2021		5/07/2021	5/07/2021		13/07/2021	13/07/2021		22/06/2021	22/06/2021		24/06/2021	25/06/2021		24/06/2021	24/06/2021		22/06/2021	22/06/2021		23/06/2021	25/06/2021		5/07/2021	5/07/2021	
Halogenated	1,2,3,4-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	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	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,2,3-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,2,4,5-tetrachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,2,4-trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,2-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,3,5-Trichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,3-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,4-dichlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	4-chlorotoluene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Bromobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Chlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Hexachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Pentachlorobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
ed Benzenes																																					
Halogenated	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	<0.5			<0.5			<0.5		
	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	<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 (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	<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
	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	<0.5	<5.0	0	<0.5	<5.0	0	<0.5	<5.0	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	<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
ed Hydrocarbons																																					
Herbicides	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	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0	<20.0			<20.0			<20.0		
	Propamidik	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Trifluralin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Inorganics	Moisture Content (dried @ 103°C)	%	1	11.0	11.0	0	2.2	2.1	5	17.0	22.0	26	15.0	13.0	14	15.0	15.0	0	9.7	12.0	21	12.0	16.0	29	**8.7**	**5.9**	**38**	9.7			12.0			8.7			17.0	
MAH	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	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,2,4-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	1,3,5-trimethylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Isopropylbenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Styrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Nitrogenated	2-Picoline	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	4-aminobiphenyl	mg/kg	0.5	<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	0	<1.0			<1.0			<1.0		
	Pentachloronitrobenzene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
ctics																																					
Metals	Arsenic	mg/kg	0 (Primary); 5 (Interlab)	<2.0	<2.0	0	<2.0	<2.0	0	**3.2**	**<2.0**	**46**	3.3	3.7	6	<2.0	<2.0	0	**4.9**	**3.6**	**31**	5.0	4.1	20	<2.0	<2.0	0	4.9	<5.0	0	**5.0**	**5.0**	**57**	<2.0	<5.0	0	3.2	<5.0	0
	Cadmium	mg/kg	0.4 (Primary); 1 (Interlab)	<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	<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	<0.4	<1.0	0
	Chromium (hexavalent)	mg/kg	1 (Primary); 0.5 (Interlab)	<1.0	<1.0	0	<2.0	<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	<1.0	0	<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0	<1.0	<0.5	0
	Chromium (III+VI)	mg/kg	0 (Primary); 2 (Interlab)	23.0	22.0	4	<5.0	<5.0	0	**5.6**	**<5.0**	**31**	**14.0**	**20.0**	**35**	<5.0	<5.0	0	**13.0**	**9.3**	**33**	**7.5**	**5.3**	**34**	<5.0	<5.0	0	**13.0**	**5.6**	**80**	7.5	7.2	8	<5.0	<2.0	0	8.8	8.0	13
	Copper	mg/kg		17.0	15.0	6	<5.0	<5.0	0	**22.0**	**8.1**	**92**	63.0	85.0	3	<5.0	<5.0	0	55.0	54.0	2	17.0	17.0	0	**<5.0**	**9.0**	**63**	**55.0**	**31.0**	**55**	17.0	18.0	6	<5.0	6.0	18	**22.0**	**15.0**	**38**
	Lead	mg/kg	5	73.0	77.0	5	<5.0	<5.0	0	**120.0**	**24.0**	**133**	79.0	85.0	7	<5.0	<5.0	0	170.0	140.0	19	**41.0**	**59.0**	**36**	13.0	10.0	26	170.0	150.0	13	**41.0**	**66.0**	**47**	**13.0**	**8.0**	**48**	**120.0**	**61.0**	**65**
	Mercury	mg/kg	0.1	0.2	0.2	0	<0.1	<0.1	0	**0.4**	**0.1**	**139**	0.3	0.3	0	<0.1	<0.1	0	**0.2**	**0.1**	**67**	**0.2**	**0.3**	**40**	<0.1	<0.1	0	**0.2**	**<0.1**	**67**	0.2	0.2	0	<0.1	<0.1	0	**0.4**	**0.2**	**67**
	Nickel	mg/kg	5 (Primary); 2 (Interlab)	9.0	8.3	8	<5.0	<5.0	0	<5.0	<5.0	0	19.0	25.0	27	<5.0	<5.0	0	**16.0**	**8.8**	**69**	<5.0	<5.0	0	<5.0	5.7	13	**16.0**	**7.0**	**98**	<5.0	3.0	0	<5.0	3.0	0	<5.0	<2.0	0
	Zinc	mg/kg		67.0	46.0	2	<5.0	<5.0	0	**230.0**	**48.0**	**130**	160.0	160.0	0	**8.7**	**5.7**	**42**	**810.0**	**300.0**	**92**	53.0	67.0	23	150.0	180.0	18	**810.0**	**455.0**	**56**	53.0	60.0	12	150.0	150.0	0	**230.0**	**154.0**	**39**
Other	Acetophenone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
Organochlo	4,4-DDE	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	a-BHC	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Aldrin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	b-BHC	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	d-BHC	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	DDD	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	DDT	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	<1.0	<1.0	0	<1.0			<1.0			<1.0		
	Dieldrin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endosulfan I	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endosulfan II	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endosulfan sulphate	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endrin	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endrin aldehyde	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Endrin ketone	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	g-BHC (Lindane)	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Heptachlor	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Heptachlor epoxide	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Methoxychlor	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
ophie Pesticides																																					
PAH	1-Chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	2-chloronaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	2-methylnaphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	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	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	7,12-dimethylbenz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5			<0.5			<0.5		
	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<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	<1.0	<1.0	0	<0.5	<0.5	0	<0.5	<1.0	0	<0.5	<0.5	0	<0.5	<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	**1.6**	**2.6**	**48**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	**2.4**	**4.8**	**67**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	**2.1**	**4.0**	**62**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Benzo(b+j)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<2.0	<2.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	**2.6**	**4.2**	**47**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	**2.0**	**3.9**	**64**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	**3.5**	**5.7**	**54**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	<1.0	<2.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	**5.5**	**13.0**	**87**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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	<1.0	<2.0	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	**2.0**	**3.2**	**46**	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<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

Field Duplicates (WATER)

Lab Report Number	808027	808027		808027	808027		806169	806169		806169	ES2123912		808027	ES2124885		808027	ES2124885	
Field ID	GW219	20210705_D01	RPD	GW222	20210705_D02	RPD	MW05	D01_210623	RPD	MW05	T01_210623	RPD	GW219	20210705_T01	RPD	GW222	20210705_T02	RPD
Sampled Date/Time	5/07/2021	5/07/2021		5/07/2021	5/07/2021		23/06/2021	23/06/2021		23/06/2021	23/06/2021		5/07/2021	5/07/2021		5/07/2021	5/07/2021	

Chem_Gr	ChemName	Units	EQL																	
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	0.04	0.04	0	0.06	0.06	0											
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	0.02	0.02	0	0.04	0.04	0											
PFOS/PFO	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01 (Primary): 0.05 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.05	0	<0.01	<0.05	0
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01 (Primary): 0.05 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.05	0	<0.01	<0.05	0
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05 (Primary): 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.02	0	<0.05	<0.02	0
	N-methylperfluorooctane sulfonamidoacetic acid	µg/L	0.05 (Primary): 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.02	0	<0.05	<0.02	0
	N-Methylperfluorooctanesulfonamidoethanol	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Perfluorobutanoic acid (PFBA)	µg/L	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.1	0	<0.05	<0.1	0
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluorononanesulfonic acid (PFNS)	mg/l	0.00001	<0.0	<0.0	0	<0.0	<0.0	0							<0.0			<0.0		
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01 (Primary): 0.02 (Interlab)	0.02	0.02	0	0.05	0.05	0							0.02	0.02	0	0.05	0.06	18
	Perfluoropropanesulfonic acid (PFPrS)	mg/l	0.00001	<0.0	<0.0	0	<0.0	<0.0	0							<0.0			<0.0		
	Sum of PFAS	µg/L	0.1 (Primary): 0.01 (Interlab)	<0.1	<0.1	0	0.18	0.18	0							<0.1	0.1	0	0.18	0.21	15
	Sum of PFAS (WA DER List)	µg/L	0.05 (Primary): 0.01 (Interlab)	0.09	0.09	0	0.18	0.18	0							0.09	0.1	11	0.18	0.21	15
	Sum of PFHxS and PFOS	µg/L	0.01	0.04	0.04	0	0.04	0.04	0							0.04	0.05	22	0.04	0.05	22
	Perfluorodecanoic acid (PFDA)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01 (Primary): 0.02 (Interlab)	0.02	0.02	0	0.04	0.04	0							0.02	0.02	0	0.04	0.05	22
	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.05	0	<0.05	<0.05	0
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluorooctanesulfonic acid (PFOS)	mg/l	0.00001	0.0	0.0	0	0.0	0.0	0							0.0	0.0	0	0.0	0.0	0
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01 (Primary): 0.02 (Interlab)	0.01	0.01	0	0.03	0.03	0							0.01	<0.02	0	0.03	0.03	0
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01 (Primary): 0.02 (Interlab)	0.02	0.02	0	0.02	0.02	0							**0.02**	**0.03**	**40**	**0.02**	**0.03**	**40**
	Perfluorononanoic acid (PFNA)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluorooctane sulfonamide (PFOSA)	µg/L	0.05 (Primary): 0.02 (Interlab)	<0.05	<0.05	0	<0.05	<0.05	0							<0.05	<0.02	0	<0.05	<0.02	0
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01 (Primary): 0.05 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.05	0	<0.01	<0.05	0
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01 (Primary): 0.02 (Interlab)	<0.01	<0.01	0	<0.01	<0.01	0							<0.01	<0.02	0	<0.01	<0.02	0
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/l	0.00001 (Primary): 0.00005 (Interlab)	<0.0	<0.0	0	<0.0	<0.0	0							<0.0	<0.0001	0	<0.0	<0.0001	0
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/l	0.00005	<0.0001	<0.0001	0	<0.0001	<0.0001	0							<0.0001	<0.0001	0	<0.0001	<0.0001	0
	Perfluorooctanoic acid (PFOA)	mg/l	0.00001	<0.0	<0.0	0	0.0	0.0	0							<0.0	0.0	0	0.0	0.0	0
)A																					
Phenols	2,3,4,6-Tetrachlorophenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	2,4,5-Trichlorophenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	2,4,6-Trichlorophenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	2,4-Dichlorophenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
	2,4-Dimethylphenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
	2,4-Dinitrophenol	mg/l	0.03	<0.03	<0.03	0				<0.03	<0.03	0	<0.03								
	2,6-Dichlorophenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
	2-Chlorophenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
	2-Methylphenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
	2-Nitrophenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	4,6-Dinitro-2-methylphenol	µg/l	30	<30.0	<30.0	0				<30.0	<30.0	0	<30.0								
	4-chloro-3-methylphenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	4-Nitrophenol	µg/l	30	<30.0	<30.0	0				<30.0	<30.0	0	<30.0								
	Pentachlorophenol	µg/l	10	<10.0	<10.0	0				<10.0	<10.0	0	<10.0								
	Phenol	µg/l	3	<3.0	<3.0	0				<3.0	<3.0	0	<3.0								
Amino Alip	N-nitrosodi-n-butylamine	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	N-nitrosodi-n-propylamine	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
hatics																					
Amino Aro	1-naphthylamine	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	2-naphthylamine	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Diphenylamine	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
matics																					
Anilines	2-nitroaniline	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Aniline	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
TRH	C6-C10	µg/l	20	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0			
	C6-C10 (F1 minus BTEX)	µg/l	20	<20.0	<20.0	0				<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0			
	C10-C16	µg/l	50 (Primary): 100 (Interlab)	**280.0**	**<50.0**	**139**				<50.0	<50.0	0	<50.0	<100.0	0	280.0	<100.0	0			
	C10-C16 (F2 minus Naphthalene)	µg/l	50 (Primary): 100 (Interlab)	**280.0**	**<50.0**	**139**				<50.0	<50.0	0	<50.0	<100.0	0	280.0	<100.0	0			
	C16-C34	µg/l	100	**300.0**	**<100.0**	**100**				<100.0	<100.0	0	<100.0	<100.0	0	300.0	<100.0	0			
	C34-C40	µg/l	100	<100.0	<100.0	0				<100.0	<100.0	0	<100.0	<100.0	0	<100.0	<100.0	0			
	C10-C40 (Sum of total)	µg/l	100	**580.0**	**<100.0**	**141**				<100.0	<100.0	0	<100.0	<100.0	0	580.0	<100.0	0			
BTEX	Benzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0			
	Toluene	µg/l	1 (Primary): 2 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<2.0	0	<1.0	<2.0	0			
	Ethylbenzene	µg/l	1 (Primary): 2 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<2.0	0	<1.0	<2.0	0			
	Xylene (m & p)	µg/l	2	<2.0	<2.0	0				<2.0	<2.0	0	<2.0	<2.0	0	<2.0	<2.0	0			
	Xylene (o)	µg/l	1 (Primary): 2 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<2.0	0	<1.0	<2.0	0			
	Xylene Total	µg/l	3 (Primary): 2 (Interlab)	<3.0	<3.0	0				<3.0	<3.0	0	<3.0	<2.0	0	<3.0	<2.0	0			
Chlorinate	Chlorinated hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Other chlorinated hydrocarbons EPAVic	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,1,1,2-tetrachloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,1,1-trichloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,1,2,2-tetrachloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,1,2-trichloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,1-dichloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,1-dichloroethene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,2,3-trichloropropane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,2-dichloroethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	1,2-dichloropropane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	1,3-dichloropropane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	Benzyl chloride	mg/l	0.005	<0.005	<0.005	0				<0.005	<0.005	0	<0.005								
	Bromochloromethane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Bromodichloromethane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Bromoform	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Carbon tetrachloride	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	Chlorodibromomethane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Chloroethane	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
	Chloroform	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Chloromethane	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
	cis-1,2-dichloroethene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	cis-1,3-dichloropropene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Dibromomethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	Dichloromethane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Hexachlorobutadiene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0	<5.0	0						
	Hexachlorocyclopentadiene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Hexachloroethane	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Trichloroethene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0	<1.0	<5.0	0			
	Tetrachloroethene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0	<1.0	<5.0	0			
	trans-1,2-dichloroethene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	trans-1,3-dichloropropene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Vinyl chloride	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
d Hydrocarbons																					
Explosives	2,4-Dinitrotoluene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	2,6-dinitrotoluene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Nitrobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
Halogenat	1,2,3,4-tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	0				<0.005	<0.005	0	<0.005								
	1,2,3,5-Tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	0				<0.005	<0.005	0	<0.005								
	1,2,3-trichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,2,4,5-tetrachlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,2,4-trichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,2-dichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,2-dichlorobenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	1,3,5-Trichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,3-dichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,3-dichlorobenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	1,4-dichlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	1,4-dichlorobenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	4-chlorotoluene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Bromobenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Chlorobenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Hexachlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Pentachlorobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
ed Benzenes																					
Halogenat	1,2-dibromoethane	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Bromomethane	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
	Dichlorodifluoromethane	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
	Iodomethane	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<5.0	0						
	Trichlorofluoromethane	µg/l	1 (Primary): 50 (Interlab)	<1.0	<1.0	0				<1.0	<1.0	0	<1.0	<50.0	0						
ed Hydrocarbons																					
Herbicides	Pronamide	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Trifluralin	mg/l	0.005	<0.005	<0.005	0				<0.005	<0.005	0	<0.005								
MAH	Total MAH	mg/l	0.003	<0.003	<0.003	0				<0.003	<0.003	0	<0.003								
	1,2,4-trimethylbenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	1,3,5-trimethylbenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Isopropylbenzene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
	Styrene	µg/l	1	<1.0	<1.0	0				<1.0	<1.0	0	<1.0								
Nitroarom	2-Picoline	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	4-aminobiphenyl	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
	Pentachloronitrobenzene	µg/l	5	<5.0	<5.0	0				<5.0	<5.0	0	<5.0								
tics																					
Metals	Arsenic (Filtered)	mg/l	0.001							<0.001	<0.001	0	<0.001	<0.001	0						
	Arsenic	mg/l	0.001	0.016	0.016	0															

Field Duplicates (WATER)

				Lab Report Number	808027	808027		808027	808027		806169	806169		806169	ES2123912		808027	ES2124885		808027	ES2124885										
				Field ID	GW219	20210705_D01	**RPD**	GW222	20210705_D02	**RPD**	MW05	D01_210623	**RPD**	MW05	T01_210623	**RPD**	GW219	20210705_T01	**RPD**	GW222	20210705_T02	**RPD**										
				Sampled Date/Time	5/07/2021	5/07/2021		5/07/2021	5/07/2021		23/06/2021	23/06/2021		23/06/2021	23/06/2021		5/07/2021	5/07/2021		5/07/2021	5/07/2021										
	Cadmium (Filtered)	mg/l	0.0002 (Primary): 0.0001 (Interlab)								<0.0002	<0.0002	0	<0.0002	<0.0001	0														
	Cadmium	mg/l	0.0002	<0.0002	<0.0002	0																								
	Chromium (hexavalent)	mg/l	0.005 (Primary): 0.01 (Interlab)	<0.005	<0.005	0											<0.005	<0.01	0											
	Chromium (III+VI) (Filtered)	mg/l	0.001								<0.001	<0.001	0	<0.001	<0.001	0														
	Chromium (III+VI)	mg/l	0.001	<0.001	<0.001	0																								
	Copper (Filtered)	mg/l	0.001								<0.001	<0.001	0	<0.001	<0.001	0														
	Copper	mg/l	0.001	**0.002**	**0.003**	**40**																								
	Lead (Filtered)	mg/l	0.001								<0.001	<0.001	0	<0.001	<0.001	0														
	Lead	mg/l	0.001	<0.001	<0.001	0																								
	Mercury (Filtered)	mg/l	0.0001								<0.0001	<0.0001	0	<0.0001	<0.0001	0														
	Mercury	mg/l	0.0001	<0.0001	<0.0001	0																								
	Nickel (Filtered)	mg/l	0.001								<0.001	<0.001	0	<0.001	<0.001	0														
	Nickel	mg/l	0.001	0.005	0.004	22																								
	Zinc (Filtered)	mg/l	0.005								<0.005	<0.005	0	<0.005	<0.005	0														
	Zinc	mg/l	0.005	0.82	0.77	6																								
Other	Acetophenone	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
Organochl	4,4-DDE	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	a-BHC	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Aldrin	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	b-BHC	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	d-BHC	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	DDD	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	DDT	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Dieldrin	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endosulfan I	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endosulfan II	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endosulfan sulphate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endrin	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endrin aldehyde	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Endrin ketone	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	g-BHC (Lindane)	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Heptachlor	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Heptachlor epoxide	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Methoxychlor	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
orine Pesticides																														
PAH	1-Chloronaphthalene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	2-chloronaphthalene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	2-methylnaphthalene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	3-methylcholanthrene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	7,12-dimethylbenz(a)anthracene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Acenaphthene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Acenaphthylene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Anthracene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Benz(a)anthracene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Benzo(a) pyrene	µg/l	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0											
	Benzo(b+j)fluoranthene	mg/l	0.001	<0.001	<0.001	0					<0.001	<0.001	0	<0.001	<0.001	0	<0.001	<0.001	0											
	Benzo(g,h,i)perylene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Benzo(k)fluoranthene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Chrysene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Dibenz(a,h)anthracene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Fluoranthene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Fluorene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Indeno(1,2,3-c,d)pyrene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Naphthalene	µg/l	10 (Primary): 5 (Interlab)	<10.0	<10.0	0					<10.0	<10.0	0	<10.0	<1.0	0	<10.0	<1.0	0											
	Naphthalene	µg/l	1 (Primary): 5 (Interlab)	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Phenanthrene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	Pyrene	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0											
	PAHs (Sum of total)	µg/l	1 (Primary): 0.5 (Interlab)	<1.0	<1.0	0					<1.0	<1.0	0	<1.0	<0.5	0	<1.0	<0.5	0											
Phthalates	Bis(2-ethylhexyl) phthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Butyl benzyl phthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Diethylphthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Dimethyl phthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Di-n-butyl phthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Di-n-octyl phthalate	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
Solvents	Methyl Ethyl Ketone	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0																
	4-Methyl-2-pentanone	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0																
	Acetone	mg/l	0.001	<0.001	<0.001	0					<0.001	<0.001	0	<0.001																
	Allyl chloride	mg/l	0.001	<0.001	<0.001	0					<0.001	<0.001	0	<0.001																
	Carbon disulfide	µg/l	1	<1.0	<1.0	0					<1.0	<1.0	0	<1.0																
SVOCs	3,3-Dichlorobenzidine	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	4-(dimethylamino) azobenzene	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	4-bromophenyl phenyl ether	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	4-chlorophenyl phenyl ether	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Bis(2-chloroethoxy) methane	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Bis(2-chloroisopropyl) ether	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	Dibenzofuran	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
	N-nitrosopiperidine	µg/l	5	<5.0	<5.0	0					<5.0	<5.0	0	<5.0																
TPH	C6-C9	µg/l	20	<20.0	<20.0	0					<20.0	<20.0	0	<20.0	<20.0	0	<20.0	<20.0	0											
	C10-C14	µg/l	50	**500.0**	**<50.0**	**164**					<50.0	<50.0	0	<50.0	<50.0	0	500.0	<50.0	0											
	C15-C28	µg/l	100	100.0	<100.0	0					<100.0	<100.0	0	<100.0	<100.0	0	100.0	<100.0	0											
	C29-C36	µg/l	100 (Primary): 50 (Interlab)	<100.0	<100.0	0					<100.0	<100.0	0	<100.0	<50.0	0	<100.0	<50.0	0											
	C10-C36	µg/l	100 (Primary): 50 (Interlab)	**600.0**	**<100.0**	**143**					<100.0	<100.0	0	<100.0	<50.0	0	600.0	<50.0	0											
VOCs	Dibenz(a,j)acridine	µg/l	0.005	<0.005	<0.005	0					<0.005	<0.005	0	<0.005																
SVOC	3&4-Methylphenol (m&p-Cresol)	mg/l	0.006	<0.006	<0.006	0					<0.006	<0.006	0	<0.006																

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

Field Blanks (WATER)

Lab Report Number	810687	810797	806169
Field ID	20210715_RO1	20210713-R01	R01_210623
Sampled_Date/Time	15/07/2021	13/07/2021	23/06/2021
Sample Type	Rinsate	Rinsate	Rinsate

Chem_Group	ChemName	Units	EQL			
	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	<0.01
	Sum of US EPA PFAS (PFOS + PFOA)*	µg/L	0.01	<0.01	<0.01	<0.01
Amino Aliphatics	N-nitrosodi-n-butylamine	µg/l	5	<5	<5	<5
	N-nitrosodi-n-propylamine	µg/l	5	<5	<5	<5
Amino Aromatics	1-naphthylamine	µg/l	5	<5	<5	<5
	2-naphthylamine	µg/l	5	<5	<5	<5
	Diphenylamine	µg/l	5	<5	<5	<5
Anilines	2-nitroaniline	µg/l	5	<5	<5	<5
	Aniline	µg/l	5	<5	<5	<5
BTEX	Benzene	µg/l	1	<1	<1	<1
	Toluene	µg/l	1	<1	<1	<1
	Ethylbenzene	µg/l	1	<1	<1	<1
	Xylene (m & p)	µg/l	2	<2	<2	<2
	Xylene (o)	µg/l	1	<1	<1	<1
	Xylene Total	µg/l	3	<3	<3	<3
Chlorinated Hydrocarbons	Chlorinated hydrocarbons EPAVic	µg/l	5	<5	**8**	<5
	Other chlorinated hydrocarbons EPAVic	µg/l	5	<5	**8**	<5
	1,1,1,2-tetrachloroethane	µg/l	1	<1	<1	<1
	1,1,1-trichloroethane	µg/l	1	<1	<1	<1
	1,1,2,2-tetrachloroethane	µg/l	1	<1	<1	<1
	1,1,2-trichloroethane	µg/l	1	<1	<1	<1
	1,1-dichloroethane	µg/l	1	<1	<1	<1
	1,1-dichloroethene	µg/l	1	<1	<1	<1
	1,2,3-trichloropropane	µg/l	1	<1	<1	<1
	1,2-dichloroethane	µg/l	1	<1	<1	<1
	1,2-dichloropropane	µg/l	1	<1	<1	<1
	1,3-dichloropropane	µg/l	1	<1	<1	<1
	Benzyl chloride	mg/l	0.005	<0.005	<0.005	<0.005
	Bromochloromethane	µg/l	1	<1	<1	<1
	Bromodichloromethane	µg/l	1	<1	<1	<1
	Bromoform	µg/l	1	<1	<1	<1
	Carbon tetrachloride	µg/l	1	<1	<1	<1
	Chlorodibromomethane	µg/l	1	<1	<1	<1
	Chloroethane	µg/l	1	<1	<1	<1
	Chloroform	µg/l	5	<5	**8**	<5
	Chloromethane	µg/l	1	<1	<1	<1
	cis-1,2-dichloroethene	µg/l	1	<1	<1	<1
	cis-1,3-dichloropropene	µg/l	1	<1	<1	<1
	Dibromomethane	µg/l	1	<1	<1	<1
	Dichloromethane	µg/l	1	<1	<1	<1
	Hexachlorobutadiene	µg/l	5	<5	<5	<5
	Hexachlorocyclopentadiene	µg/l	5	<5	<5	<5
	Hexachloroethane	µg/l	5	<5	<5	<5
	Trichloroethene	µg/l	1	<1	<1	<1
	Tetrachloroethene	µg/l	1	<1	<1	<1
	trans-1,2-dichloroethene	µg/l	1	<1	<1	<1
	trans-1,3-dichloropropene	µg/l	1	<1	<1	<1
	Vinyl chloride	µg/l	1	<1	<1	<1
Explosives	2,4-Dinitrotoluene	µg/l	5	<5	<5	<5
	2,6-dinitrotoluene	µg/l	5	<5	<5	<5
	Nitrobenzene	µg/l	5	<5	<5	<5
Halogenated Benzenes	1,2,3,4-tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	<0.005
	1,2,3,5-Tetrachlorobenzene	mg/l	0.005	<0.005	<0.005	<0.005
	1,2,3-trichlorobenzene	µg/l	5	<5	<5	<5
	1,2,4,5-tetrachlorobenzene	µg/l	5	<5	<5	<5
	1,2,4-trichlorobenzene	µg/l	5	<5	<5	<5
	1,2-dichlorobenzene	µg/l	1	<5	<5	<5
	1,3,5-Trichlorobenzene	µg/l	5	<5	<5	<5
	1,3-dichlorobenzene	µg/l	1	<5	<5	<5
	1,4-dichlorobenzene	µg/l	1	<5	<5	<5
	4-chlorotoluene	µg/l	1	<1	<1	<1
	Bromobenzene	µg/l	1	<1	<1	<1
	Chlorobenzene	µg/l	1	<1	<1	<1
	Hexachlorobenzene	µg/l	5	<5	<5	<5
	Pentachlorobenzene	µg/l	5	<5	<5	<5
Halogenated Hydrocarbons	1,2-dibromoethane	µg/l	1	<1	<1	<1
	Bromomethane	µg/l	1	<1	<1	<1
	Dichlorodifluoromethane	µg/l	1	<1	<1	<1
	Iodomethane	µg/l	1	<1	<1	<1
	Trichlorofluoromethane	µg/l	1	<1	<1	<1
Herbicides	Dinoseb	µg/l	100		<100	
	Pronamide	µg/l	5	<5	<5	<5
	Trifluralin	mg/l	0.005	<0.005	<0.005	<0.005
MAH	Total MAH	mg/l	0.003	<0.003	<0.003	<0.003
	1,2,4-trimethylbenzene	µg/l	1	<1	<1	<1
	1,3,5-trimethylbenzene	µg/l	1	<1	<1	<1
	Isopropylbenzene	µg/l	1	<1	<1	<1
	Styrene	µg/l	1	<1	<1	<1
Metals	Arsenic	mg/l	0.001	<0.001	<0.001	
	Arsenic (Filtered)	mg/l	0.001			<0.001
	Cadmium	mg/l	0.0002	<0.0002	<0.0002	
	Cadmium (Filtered)	mg/l	0.0002			<0.0002
	Chromium (hexavalent)	mg/l	0.005	<0.005	<0.005	
	Chromium (III+VI)	mg/l	0.001	<0.001	**0.002**	
	Chromium (III+VI) (Filtered)	mg/l	0.001			<0.001
	Copper	mg/l	0.001	<0.001	**0.015**	
	Copper (Filtered)	mg/l	0.001			<0.001
	Lead	mg/l	0.001	<0.001	**0.051**	
	Lead (Filtered)	mg/l	0.001			<0.001
	Mercury	mg/l	0.0001	<0.0001	<0.0001	
	Mercury (Filtered)	mg/l	0.0001			<0.0001
	Nickel	mg/l	0.001	<0.001	**0.002**	
	Nickel (Filtered)	mg/l	0.001			<0.001
	Zinc	mg/l	0.005	<0.005	**0.024**	
	Zinc (Filtered)	mg/l	0.005			<0.005
Nitroaromatics	2-Picoline	µg/l	5	<5	<5	<5
	4-aminobiphenyl	µg/l	5	<5	<5	<5
	Pentachloronitrobenzene	µg/l	5	<5	<5	<5
Organochlorine Pesticides	4,4-DDE	µg/l	5	<5	<5	<5
	a-BHC	µg/l	5	<5	<5	<5
	Aldrin	µg/l	5	<5	<5	<5
	b-BHC	µg/l	5	<5	<5	<5
	d-BHC	µg/l	5	<5	<5	<5
	DDD	µg/l	5	<5	<5	<5
	DDT	µg/l	5	<5	<5	<5
	Dieldrin	µg/l	5	<5	<5	<5
	Endosulfan I	µg/l	5	<5	<5	<5
	Endosulfan II	µg/l	5	<5	<5	<5
	Endosulfan sulphate	µg/l	5	<5	<5	<5
	Endrin	µg/l	5	<5	<5	<5
	Endrin aldehyde	µg/l	5	<5	<5	<5
	Endrin ketone	µg/l	5	<5	<5	<5
	g-BHC (Lindane)	µg/l	5	<5	<5	<5
	Heptachlor	µg/l	5	<5	<5	<5
	Heptachlor epoxide	µg/l	5	<5	<5	<5
	Methoxychlor	µg/l	5	<5	<5	<5

Field Blanks (WATER)

			Lab Report Number	810687	810797	806169
			Field ID	20210715_RO1	20210713-R01	R01_210623
			Sampled_Date/Time	15/07/2021	13/07/2021	23/06/2021
			Sample Type	Rinsate	Rinsate	Rinsate
Other	Acetophenone	µg/l	5	<5	<5	<5
PAH	1-Chloronaphthalene	µg/l	5	<5	<5	<5
	2-chloronaphthalene	µg/l	5	<5	<5	<5
	2-methylnaphthalene	µg/l	5	<5	<5	<5
	3-methylcholanthrene	µg/l	5	<5	<5	<5
	7,12-dimethylbenz(a)anthracene	µg/l	5	<5	<5	<5
	Acenaphthene	µg/l	1	<1	<1	<1
	Acenaphthylene	µg/l	1	<1	<1	<1
	Anthracene	µg/l	1	<1	<1	<1
	Benz(a)anthracene	µg/l	1	<1	<1	<1
	Benzo(a) pyrene	µg/l	1	<1	<1	<1
	Benzo(b+j)fluoranthene	mg/l	0.001	<0.001	<0.001	<0.001
	Benzo(g,h,i)perylene	µg/l	1	<1	<1	<1
	Benzo(k)fluoranthene	µg/l	1	<1	<1	<1
	Chrysene	µg/l	1	<1	<1	<1
	Dibenz(a,h)anthracene	µg/l	1	<1	<1	<1
	Fluoranthene	µg/l	1	<1	<1	<1
	Fluorene	µg/l	1	<1	<1	<1
	Indeno(1,2,3-c,d)pyrene	µg/l	1	<1	<1	<1
	Naphthalene	µg/l	1	<10	<10	<10
	Phenanthrene	µg/l	1	<1	<1	<1
	Pyrene	µg/l	1	<1	<1	<1
	PAHs (Sum of total)	µg/l	1	<1	<1	<1
PFOS/PFOA	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.01	<0.01	<0.01	<0.01
	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.01	<0.01	<0.01	<0.01
	N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	<0.05
	N-methylperfluorooctane sulfonamidoacetic acid	µg/L	0.05	<0.05	<0.05	<0.05
	N-Methylperfluorooctanesulfonamidoethanol	µg/L	0.05	<0.05	<0.05	<0.05
	Perfluorobutanoic acid (PFBA)	µg/L	0.05	<0.05	<0.05	<0.05
	Perfluorodecanesulfonic acid (PFDS)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorononanesulfonic acid (PFNS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001
	Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluoropentanoic acid (PFPeA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluoropropanesulfonic acid (PFPrS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001
	Sum of PFAS	µg/L	0.1	<0.1	<0.1	<0.1
	Sum of PFAS (WA DER List)	µg/L	0.05	<0.05	<0.05	<0.05
	Sum of PFHxS and PFOS	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorodecanoic acid (PFDA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorohexanoic acid (PFHxA)	µg/L	0.01	<0.01	<0.01	<0.01
	N-Ethyl perfluorooctane sulfonamide (NEtFOSA)	µg/L	0.05	<0.05	<0.05	<0.05
	N-ethylperfluorooctanesulfonamidoethanol (NEtFOSE)	µg/L	0.05	<0.05	<0.05	<0.05
	N-Methyl perfluorooctane sulfonamide (NMeFOSA)	µg/L	0.05	<0.05	<0.05	<0.05
	Perfluorobutane sulfonic acid (PFBS)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorooctanesulfonic acid (PFOS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001
	Perfluorododecanoic acid (PFDoDA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluoroheptanoic acid (PFHpA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorononanoic acid (PFNA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorooctane sulfonamide (PFOSA)	µg/L	0.05	<0.05	<0.05	<0.05
	Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluorotridecanoic acid (PFTrDA)	µg/L	0.01	<0.01	<0.01	<0.01
	Perfluoroundecanoic acid (PFUnDA)	µg/L	0.01	<0.01	<0.01	<0.01
	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/l	0.00001	<0.00001	<0.00001	<0.00001
	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/l	0.00005	<0.00005	<0.00005	<0.00005
	Perfluorooctanoic acid (PFOA)	mg/l	0.00001	<0.00001	<0.00001	<0.00001
Phenols	2,3,4,6-Tetrachlorophenol	µg/l	10	<10	<10	<10
	2,4,5-Trichlorophenol	µg/l	10	<10	<10	<10
	2,4,6-Trichlorophenol	µg/l	10	<10	<10	<10
	2,4-Dichlorophenol	µg/l	3	<3	<3	<3
	2,4-Dimethylphenol	µg/l	3	<3	<3	<3
	2,4-Dinitrophenol	mg/l	0.03	<0.03	<0.03	<0.03
	2,6-Dichlorophenol	µg/l	3	<3	<3	<3
	2-Chlorophenol	µg/l	3	<3	<3	<3
	2-Methylphenol	µg/l	3	<3	<3	<3
	2-Nitrophenol	µg/l	10	<10	<10	<10
	4,6-Dinitro-2-methylphenol	µg/l	30	<30	<30	<30
	4,6-Dinitro-o-cyclohexyl phenol	µg/l	100		<100	
	4-chloro-3-methylphenol	µg/l	10	<10	<10	<10
	4-Nitrophenol	µg/l	30	<30	<30	<30
	Cresol Total	mg/l	0.002		<0.006	
	Pentachlorophenol	µg/l	10	<10	<10	<10
	Tetrachlorophenols	µg/l	30		<30	
	Phenol	µg/l	3	<3	<3	<3
	Phenols (Total Halogenated)	mg/l	0.01		<0.01	
	Phenols (Total Non Halogenated)	mg/l	0.1		<0.1	
Phthalates	Bis(2-ethylhexyl) phthalate	µg/l	5	<5	<5	<5
	Butyl benzyl phthalate	µg/l	5	<5	<5	<5
	Diethylphthalate	µg/l	5	<5	<5	<5
	Dimethyl phthalate	µg/l	5	<5	<5	<5
	Di-n-butyl phthalate	µg/l	5	<5	<5	<5
	Di-n-octyl phthalate	µg/l	5	<5	<5	<5
Solvents	Methyl Ethyl Ketone	µg/l	1	<1	<1	<1
	4-Methyl-2-pentanone	µg/l	1	<1	<1	<1
	Acetone	mg/l	0.001	<0.001	<0.001	<0.001
	Allyl chloride	mg/l	0.001	<0.001	<0.001	<0.001
	Carbon disulfide	µg/l	1	<1	<1	<1
SVOC	3&4-Methylphenol (m&p-Cresol)	mg/l	0.006	<0.006	<0.006	<0.006
SVOCs	3,3-Dichlorobenzidine	µg/l	5	<5	<5	<5
	4-(dimethylamino) azobenzene	µg/l	5	<5	<5	<5
	4-bromophenyl phenyl ether	µg/l	5	<5	<5	<5
	4-chlorophenyl phenyl ether	µg/l	5	<5	<5	<5
	Bis(2-chloroethoxy) methane	µg/l	5	<5	<5	<5
	Bis(2-chloroisopropyl) ether	µg/l	5	<5	<5	<5
	Dibenzofuran	µg/l	5	<5	<5	<5
	N-nitrosopiperidine	µg/l	5	<5	<5	<5
TPH	C6-C9	µg/l	20	<20	<20	<20
	C10-C14	µg/l	50	<50	<50	<50
	C15-C28	µg/l	100	<100	<100	<100
	C29-C36	µg/l	100	<100	<100	<100
	C10-C36	µg/l	100	<100	<100	<100
TRH	C6-C10	µg/l	20	<20	<20	<20
	C6-C10 (F1 minus BTEX)	µg/l	20	<20	<20	<20
	C10-C16	µg/l	50	<50	<50	<50
	C10-C16 (F2 minus Naphthalene)	µg/l	50	<50	<50	<50
	C16-C34	µg/l	100	<100	<100	<100
	C34-C40	µg/l	100	<100	<100	<100
	C10-C40 (Sum of total)	µg/l	100	<100	<100	<100
VOCs	Dibenz(a,j)acridine	mg/l	0.005	<0.005	<0.005	<0.005

Trip Blanks and Trip Spikes

Lab Report Number			807316	808027	810687	810797	806169	806169
Field ID			TRIP BLANK	TB	TRIP BLANK	TRIP BLANK	TB	TB
Sampled_Date/Time			1/07/2021	5/07/2021	15/07/2021	13/07/2021	24/06/2021	24/06/2021
Sample Type			Trip_B	Trip_B	Trip_B	Trip_B	Trip_B	Trip_B
Chem_Group	**ChemName**	**Units**	**EQL**						
BTEX	Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Xylene (m & p)	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
	Xylene (o)	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	Xylene Total	mg/kg	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
	Naphthalene	mg/kg	0.5	<0.5	<0.5		<0.5	<0.5	<0.5
TPH	C6-C9	mg/kg	20	<20	<20			<20	<20
TRH	C6-C10	mg/kg	20	<20	<20			<20	<20
	C6-C10 (F1 minus BTEX)	mg/kg	20	<20	<20			<20	<20

Lab Report Number			806169	806169	808027	807316	810687
Field ID			TS	TS	TS	TRIP SPIKE	TRIP SPIKE
Sampled_Date/Time			24/06/2021	24/06/2021	5/07/2021	1/07/2021	15/07/2021
Sample Type			Trip_S	Trip_S	Trip_S	Trip_S	Trip_S
Chem_Group	**ChemName**	**Units**	**EQL**					
	Mass FA	%						
BTEX	Benzene	mg/kg	1	99	110	97	91	86
	Toluene	mg/kg	1	92	100	91	85	81
	Ethylbenzene	mg/kg	1	93	110	92	84	80
	Xylene (m & p)	mg/kg	1	95	100	92	84	81
	Xylene (o)	mg/kg	1	95	100	94	87	83
	Xylene Total	mg/kg	1	94	100	92	84	81

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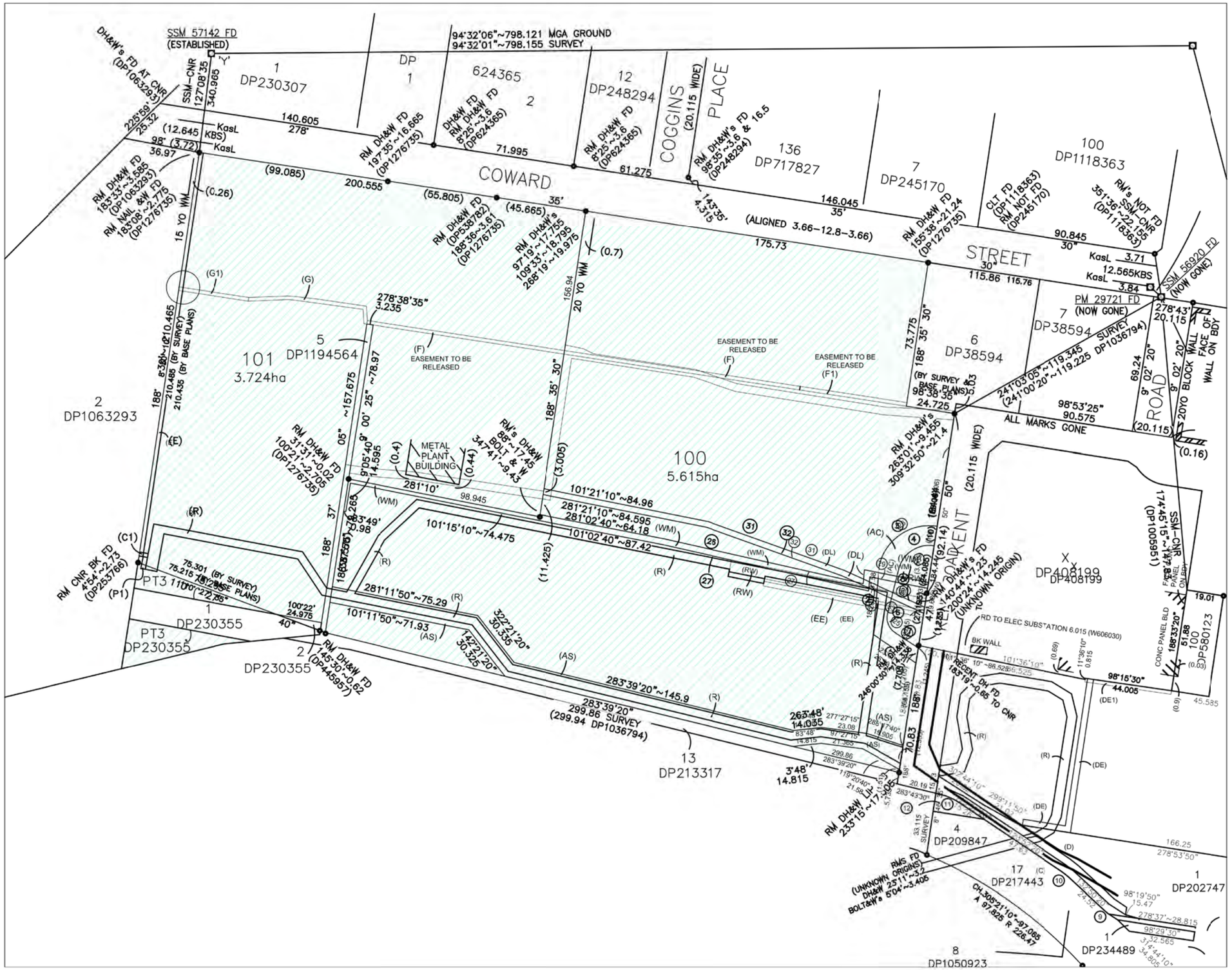
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ATTACHMENT C **DUE DILIGENCE CONTAMINATION ASSESSMENT LOT A – COWARD STREET AND KENT ROAD, MASCOT, NSW 3RD AUGUST 2021 PROJECT NO.: 067031**


SSM 57142 FD
(ESTABLISHED)
94°32'06"~798.121 MGA GROUND
94°32'01"~798.155 SURVEY
DP 1
624365
2
1
DP230307
12
DP248294
COGGINS PLACE
(20.115 WIDE)
136
DP717827
7
DP245170
100
DP1118363
COWARD
STREET
ROAD
140.605
278°
71.995
61.275
146.045
35'
175.73
90.845
30"
115.86
115.76
73.775
69.24
24.725
98°53'25"
90.575
ALL MARKS GONE
(20.115)
(ALIGNED 3.66–12.8–3.66)
200.555
(99.085)
(55.805)
(45.665)
35'
(0.26)
15 YO WM
(0.7)
156.94
20 YO WM
(G1)
(G)
278°38'35"
3.235
(F)
EASEMENT TO BE RELEASED
(F1)
101
3.724ha
DP1194564
5
2
DP1063293
100
5.615ha
6
DP38594
7
DP38594
PM 29721 FD
(NOW GONE)
SSM 56920 FD
(NOW GONE)
278°43'
20.115
20YO BLOCK WALL FACE OF WALL ON BDY
(0.16)
188° 8'30"~210.465
210.485 (BY SURVEY)
210.435 (BY BASE PLANS)
~157.675
9°00'25"~78.97
188° 35' 30"
METAL PLANT BUILDING
(0.4)
(0.44)
(3.005)
281°10'
98.945
101°21'10"~84.96
281°21'10"~84.595
281°02'40"~64.18
101°15'10"~74.475
101°02'40"~87.42
281°11'50"~75.29
101°11'50"~71.93
283°49'
10.98
283°39'20"~145.9
283°39'20"
299.86 SURVEY
(299.94 DP1036794)
322°21'20"
30.335
142°21'20"
30.325
263°48'
14.035
3°48'
14.815
13
DP213317
2
DP230355
PT3
DP230355
1
DP230355
PT3 110°00'22.55"
75.301 (BY SURVEY)
75.215 (BY BASE PLANS)
100°22'
24.976
40"
RM DH&W FD 145°30'~0.62 (DP45957)
RM CNR BK FD 4°54'~2.73 (DP253766)
(C1)
(P1)
RM DH&W FD 31°31'~0.02 100°21'~2.705 (DP1276735)
RM DH&W FD 185°33'~3.586 (DP1063293)
RM NAIL &W FD 185°08'~2.775 (DP1276735)
RM DH&W FD 197°35'~16.665 (DP1276735)
RM DH&W FD 188°36'~3.61 (DP1276735)
RM DH&W FD (DP538782)
RM DH&W's 97°19'~17.755 109°33'~18.799 268°19'~19.975
RM DH&W FD 8°25'~3.6 (DP624365)
RM DH&W's FD 98°35'~3.6 (DP248294) & 16.5
RM DH&W FD 155°38'~21.24 (DP1276735)
CLT FD (DP1118363) RM NOT FD (DP245170)
RM's NOT FD 351°36'~22.15 SSM-CNR (DP1118363)
KasL 3.71
12.565KBS
KasL 3.84
SSM-CNR 127°08'35" 340.965
DH&W's FD AT CNR (DP1063293)
225°59' 25.32
KasL (12.645 KBS)
98° (3.72)
KasL
36.97
RM's DH&W FD 88°17'48" BOLT & W 347°41'~9.43
RM DH&W's 263°01'~3.455 309°32'50"~21.4
RM DH&W's FD 140°44'~7.23 200°24'~14.245 (UNKNOWN ORIGIN)
RMS FD (UNKNOWN ORIGINS) DH&W 23°11'~32 BOLT&W's 5°04'~3.406
CH 305°21'10"~97.085 A 97.825 R 226.47
RD TO ELEC SUBSTATION 6.015 (W606030)
BK WALL
RECENT DH FD 183°19'~0.65 TO CNR
CONC PANEL BLD
188°33'20"
51.88
100
DP580123
19.01
(0.03)
98°15'30"
44.005
(DE1)
45.585
SSM-CNR 174°45'15" (DP1005951)
FACE OF PANEL ON BDY
DP408199
X
Y
4
DP209847
17 (C)
DP217443
1
DP202747
166.25
278°53'50"
98°19'50"
15.47
278°37'~28.815
98°29'30"
32.565
1
DP234489
8
DP1050923
(AC)
(DL)
(EE)
(AS)
(R)
(RW)
(WM)
(DE)
(D)
(E)
(F)
(F1)
(G)
(G1)
(C1)
(P1)
(R)
(WM)
(RW)
(EE)
(AS)
(DL)
(AC)
(DE)
(D)
(DE1)
(0.9)
(0.69)
(0.815)
(0.03)
(0.16)
(20.115 WIDE)
50"
(11.425)
(7.708)
(92.14)
(134.445)
(27.983)
(1.225)
(4.245)
(4.315)
(4.335)
(4.345)
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(4.645)
(4.655)
(4.665)
(4.675)
(4.685)
(4.695)
(4.705)
(4.715)
(4.725)

QF 1&2 : 262-271 & 273A Coward St & 76-82 Kent Rd, MASCOT

TOTAL SITE AREA = 94,565.6 m²
FSR = 2:1
PERMISSABLE AREA = 189,131 m²
PROPOSED TOTAL AREA = 189,131 m²

QF1&2 TOTAL CARPARK SPACES REQUIRED = 822
QF1&2 TOTAL CARPARK SPACES PROPOSED = 822

LANDSCAPE REQUIREMENTS

LANDSCAPE AREA REQUIRED (10% of site area) = 9,456.6 m2
LANDSCAPE AREA PROPOSED = 10,522.7 m2 (11.12%)

Sheet List	
Sheet #	Sheet Name
A 001	Survey
A 010	Cover Sheet / Summary
A 015	Site Plan
A 100	Lower Ground Plan
A 110	Ground Floor Plan
A 111	Upper Ground Plan
A 115	Ground Floor- Office Mezz
A 120	First Floor Plan
A 125	First Floor Mezzanine Plan
A 130	Second Floor Plan
A 135	Second Floor Mezzanine Plan
A 140	Third Floor Plan
A 145	Third Floor Mezzanine Plan
A 150	Roof Plan
A 200	Elevations
A 300	East-West Sections
A 301	North-South Sections
A 410	Perspective View 01
A 415	Perspective View 02
A 420	Perspective View 03
A 700	Shadow Diagram 21 June
A 710	Shadow Diagram 21 March

QF 1:
263-273 & 273A Coward St Mascot

PROPOSED GFA **92,751 m²**
STOREYS 4 STOREY WAREHOUSE WITH OFFICE MEZZANINE

LEP MAXIMUM HEIGHT **44 m**
PROPOSED HEIGHT 44 m WAREHOUSE (INCLUDING LIFT & STAIR OVERRUNS)

QF1- Total Area Schedule

Name	Area
ANC. OFFICE (Ancillary Office)	6516 m²
CRT (Cafe / Restaurant / Take Away)	298 m²
EoT (End of Trip Facility)	476 m²
INDOOR REC. (Indoor Recreation)	322 m²
LOBBY	142 m²
OFFICE PREM. (Office Premises)	2914 m²
WAREHOUSE	82083 m²
TOTAL	92751 m²

QF1- Area Schedule

Level	Name	Area
Lower Ground Floor	EoT	476 m²
Lower Ground Floor	LOBBY	80 m²
Lower Ground Floor	OFFICE PREM.	1697 m²
QF1- Ground Floor	WAREHOUSE	21299 m²
COMMERCIAL GROUND FLOOR	CRT	298 m²
COMMERCIAL GROUND FLOOR	INDOOR REC.	322 m²
COMMERCIAL GROUND FLOOR	LOBBY	62 m²
COMMERCIAL GROUND FLOOR	OFFICE PREM.	1217 m²
QF1_Ground Floor- OFFICE	ANC. OFFICE	2157 m²
QF1- First floor	WAREHOUSE	19677 m²
QF1-First Floor - OFFICE	ANC. OFFICE	1401 m²
QF1- Second Floor	WAREHOUSE	19525 m²
QF1-Second Floor - OFFICE	ANC. OFFICE	1532 m²
QF1-Third Floor	WAREHOUSE	21582 m²
QF1-Third Floor - OFFICE	ANC. OFFICE	1426 m²
TOTAL		92751 m²

QF1- DCP PARKING REQUIREMENTS

DCP PARKING REQUIREMENTS	WAREHOUSE	OFFICE MEZZANINE & CAFE / BREWERY / TAKE AWAY / CONVENIENCE
DCP REQUIREMENTS	1 PER 300 m²	1 PER 80 m²
PROPOSED AREAS	82,083 m²	10,192 m²
REQUIRED SPACES	274	128

TOTAL CAR SPACE REQUIRED = 402
TOTAL CAR SPACE PROVIDED = 402

QF 2:
76-82 Kent Rd Mascot

PROPOSED GFA **96,380 m²**
STOREYS 4 STOREY WAREHOUSE WITH OFFICE MEZZANINE

LEP MAXIMUM HEIGHT **44 m**
PROPOSED HEIGHT 44 m WAREHOUSE (INCLUDING LIFT & STAIR OVERRUNS)

QF2- Total Area Schedule

Name	Area
ANC. OFFICE (Ancillary Office)	5042 m²
CRT (Cafe / Restaurant / Take Away)	1001 m²
EoT (End of Trip Facility)	427 m²
INDOOR REC. (Indoor Recreation)	1644 m²
LOBBY	205 m²
NS (Neighbourhood Shop)	100 m²
OFFICE PREM. (Office Premises)	2166 m²
OUTDOOR RECREATION	1000 m²
WAREHOUSE	84795 m²
TOTAL	96380 m²

QF2- Area Schedule

Level	Name	Area
Lower Ground Floor	CRT	1001 m²
Lower Ground Floor	EoT	427 m²
Lower Ground Floor	LOBBY	80 m²
Lower Ground Floor	NS	100 m²
Lower Ground Floor	OFFICE PREM.	522 m²
QF2-Ground Floor	ANC. OFFICE	390 m²
QF2-Ground Floor	WAREHOUSE	20504 m²
COMMERCIAL GROUND FLOOR	LOBBY	62 m²
COMMERCIAL GROUND FLOOR	OFFICE PREM.	1644 m²
Upper Ground Floor	INDOOR REC.	1644 m²
Upper Ground Floor	LOBBY	62 m²
QF2-Ground Floor- Office Mezz	OUTDOOR RECREATION	1000 m²
QF2-First Floor	WAREHOUSE	21008 m²
QF2-First Floor- Office Mezz	ANC. OFFICE	1507 m²
QF2-Second Floor	WAREHOUSE	20718 m²
QF2-Second Floor- Office Mezz	ANC. OFFICE	1585 m²
QF2-Third Floor	WAREHOUSE	22564 m²
QF2-Third Floor- Office Mezz	ANC. OFFICE	1560 m²
TOTAL		96380 m²

QF2- DCP PARKING REQUIREMENTS

DCP PARKING REQUIREMENTS	WAREHOUSE	OFFICE MEZZANINE & CAFE / BREWERY / TAKE AWAY / CONVENIENCE
DCP REQUIREMENTS	1 PER 300 m²	1 PER 80 m²
PROPOSED AREAS	84,795 m²	10,953 m²
REQUIRED SPACES	283	137

TOTAL CAR SPACE REQUIRED = 420
TOTAL CAR SPACE PROVIDED = 420

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NOMINATED ARCHITECTS:
David Stevenson NSW 6317

Rev	Description	Date
A	PRELIMINARY PLANNING PROPOSAL	13/03/23
B	PRELIMINARY PLANNING PROPOSAL	21/03/23
C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse
263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

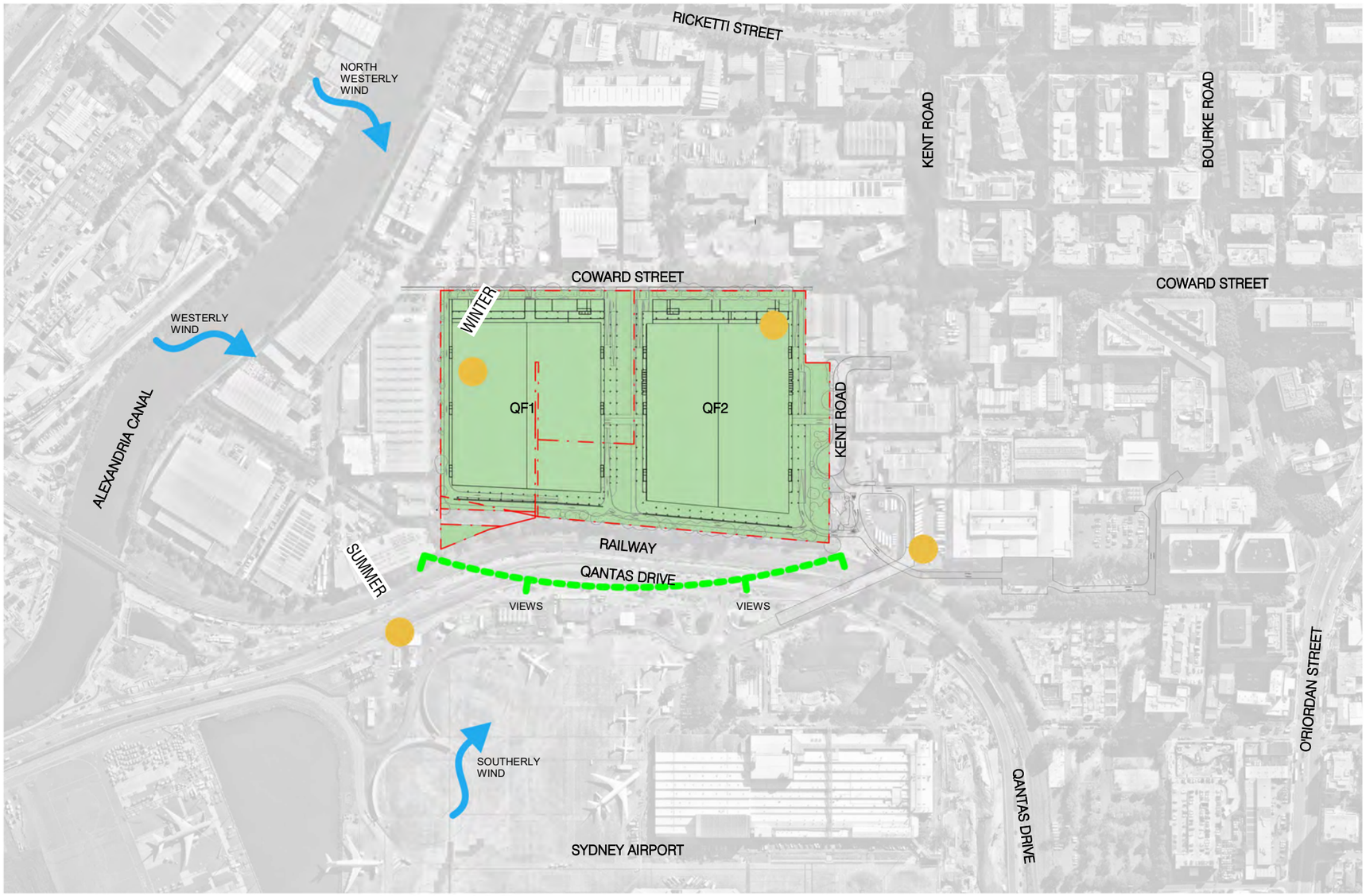
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Cover Sheet / Summary

DRAWING Nº.: **P-A 010**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:01:09 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: E

PLANNING PROPOSAL



1 **Site Plan**
1 : 2500

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NOMINATED ARCHITECTS:
David Stevenson NSW 6317

Rev	Description	Date
A	PRELIMINARY PLA	05/05/23

KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
N SHOP= NEIGHBOURHOOD SHOP
A.O= ANCILLARY OFFICE
LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

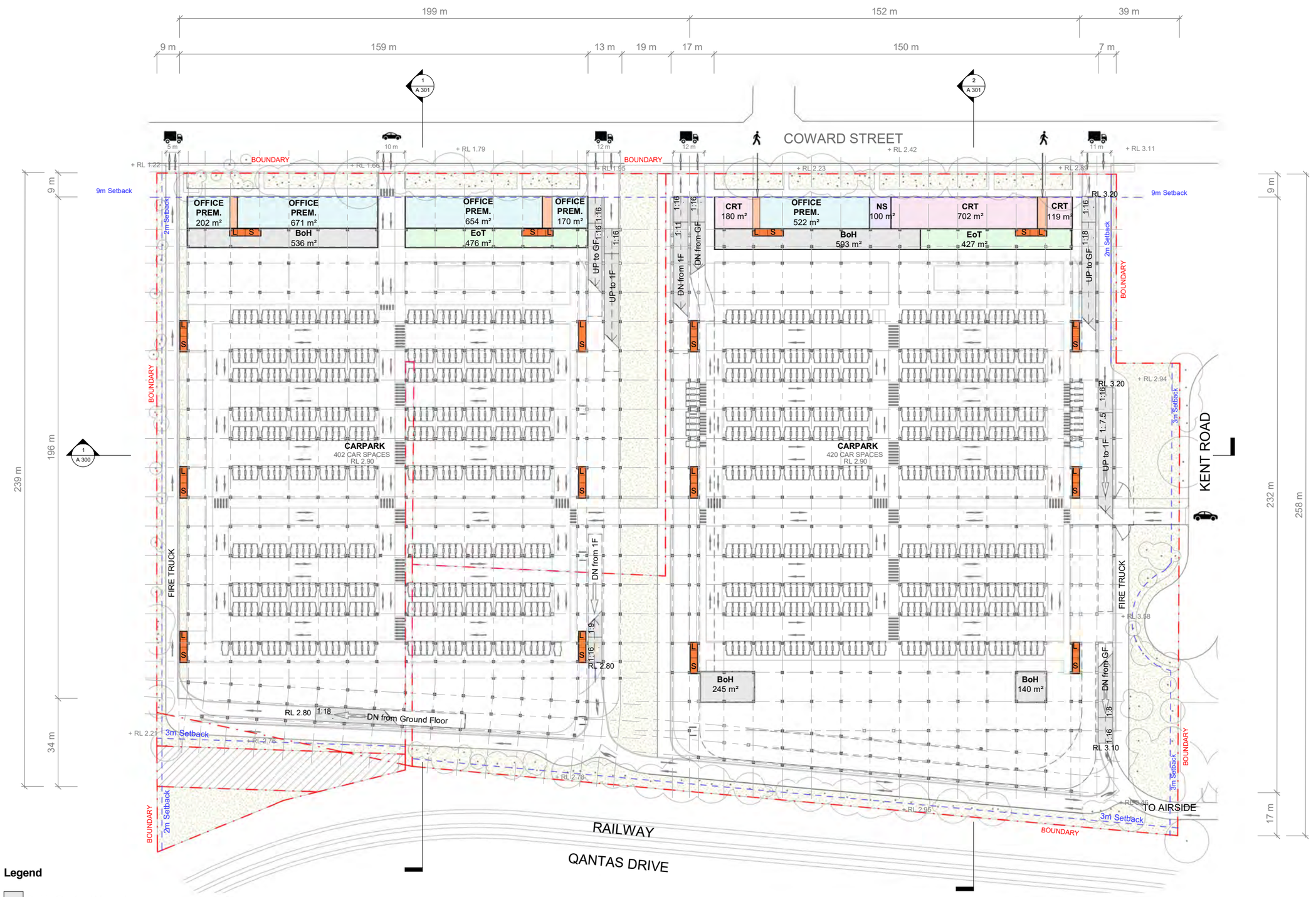
TITLE: **FSR 2:1**
Site Plan

DRAWING Nº.: **P-A 015**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:13 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: A

PLANNING PROPOSAL



Legend

- BoH (Back of House)
- CORE
- CRT (Cafe / Restaurant / Take away)
- EoT (End of Trip facility)
- LOBBY
- NS (Neighbourhood Shop)
- OFFICE PREM. (Office Premises)

NOTE:
TYPICAL STRUCTURAL GRID
11.40*11.40

SCALE BAR - 1:750 @ A1

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David Stevenson NSW 6317

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A	PRELIMINARY PLANNING PROPOSAL	13/03/23
B	PRELIMINARY PLANNING PROPOSAL	21/03/23
C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

KEY
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L= LIFTS
S= STAIRS
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LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse
263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

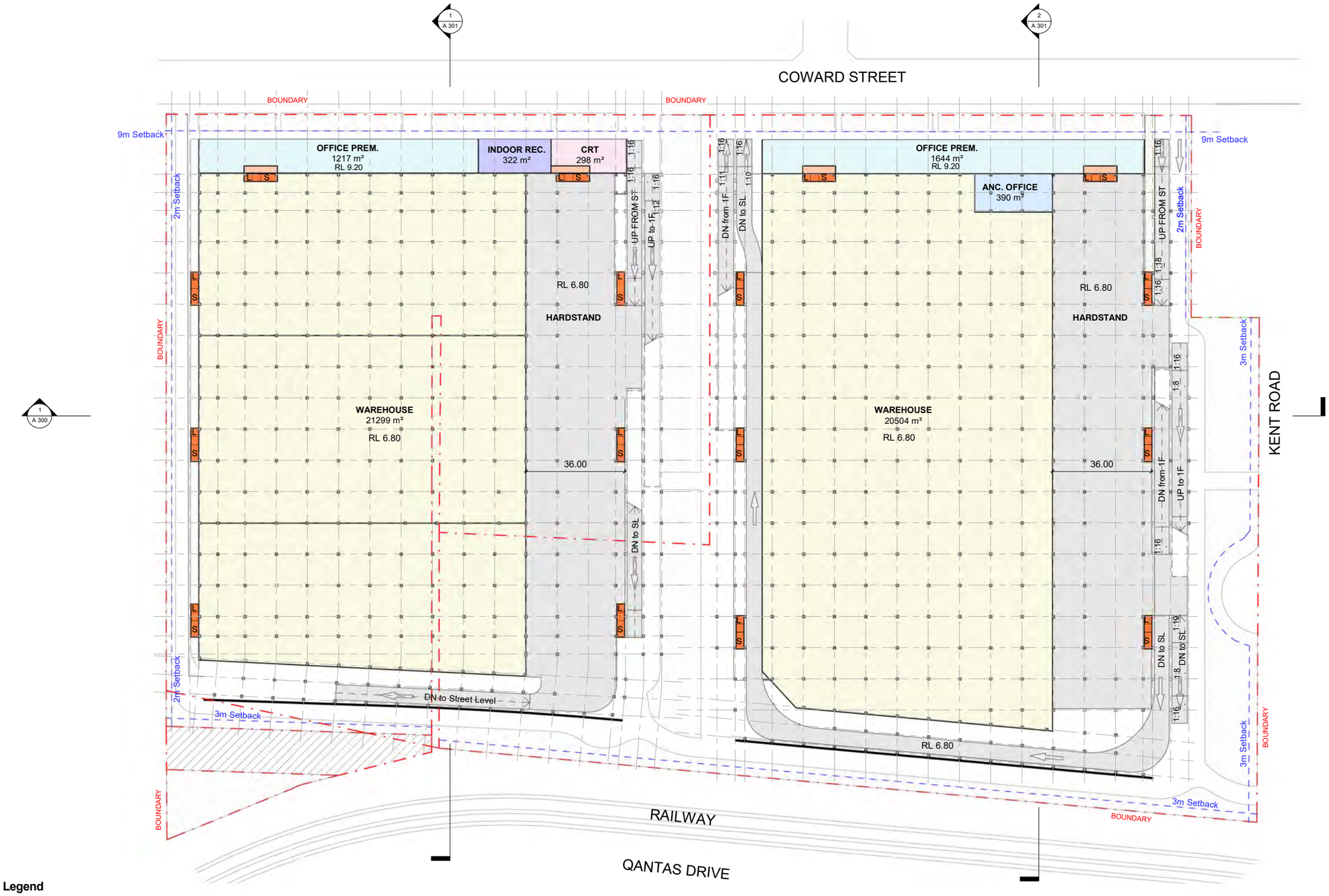
TITLE: **FSR 2:1**
Lower Ground Plan

DRAWING Nº.: **P-A 100**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:17 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: **E**

PLANNING PROPOSAL



Legend

- ANC. OFFICE (Ancillary Office)
- CORE
- CRT (Cafe / Restaurant / Take away)
- INDOOR REC. (Indoor Recreation)
- LOBBY
- OFFICE PREM. (Office Premises)
- WAREHOUSE

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C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

KEY

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LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

Ground Floor Plan

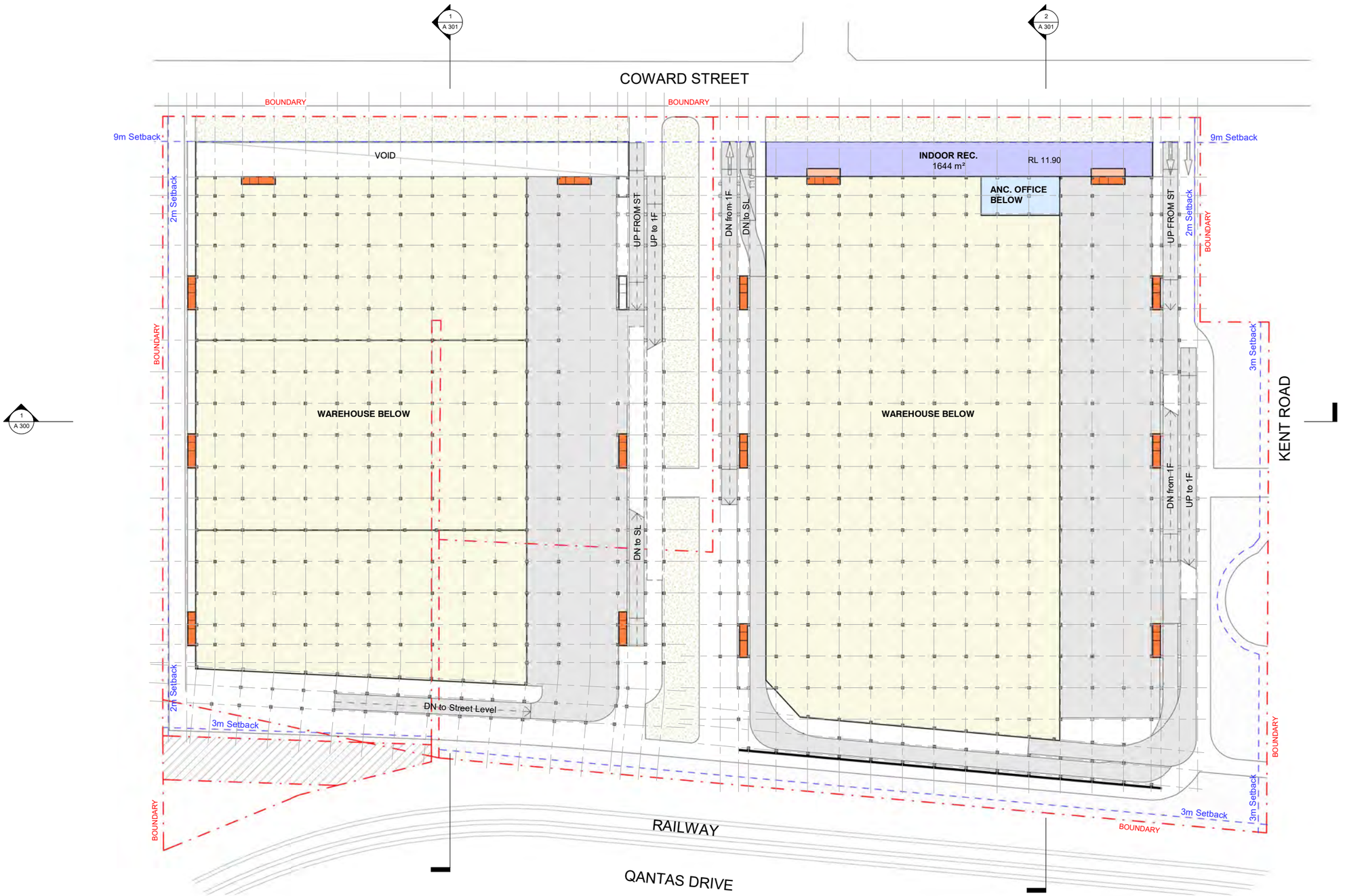
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DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:21 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: E

PLANNING PROPOSAL

0 7.5 15 22.5 30 37.5 m
SCALE BAR - 1:750 @ A1



Legend

- CORE
- INDOOR REC. (Indoor Recreation)
- LOBBY
- OFFICE PREM. (Office Premises)
- WAREHOUSE

0 7.5 15 22.5 30 37.5 m

SCALE BAR - 1:750 @ A1

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LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

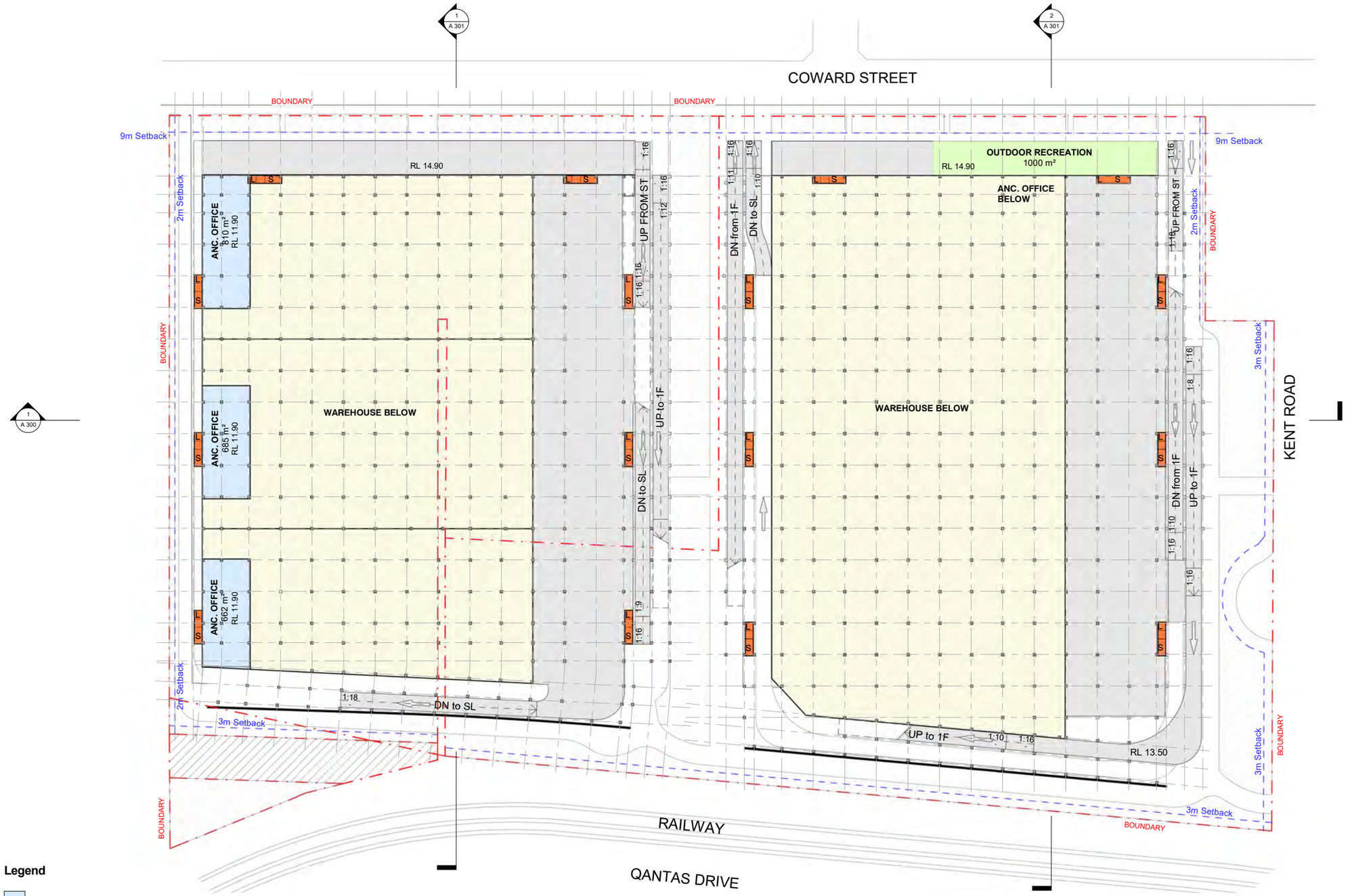
Upper Ground Plan

DRAWING Nº.: **P-A 111**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:01:26 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: E

PLANNING PROPOSAL



Legend

- ANC. OFFICE (Ancillary Office)
- CORE
- INDOOR REC. (Indoor Recreation)
- LOBBY
- OFFICE PREM. (Office Premises)
- OUTDOOR RECREATION
- WAREHOUSE
- WAREHOUSE BELOW

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E	PRELIMINARY PLA	05/05/23

KEY

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LB= LOBBY

SCALE BAR - 1:750 @ A1 (0, 7.5, 15, 22.5, 30, 37.5 m)

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

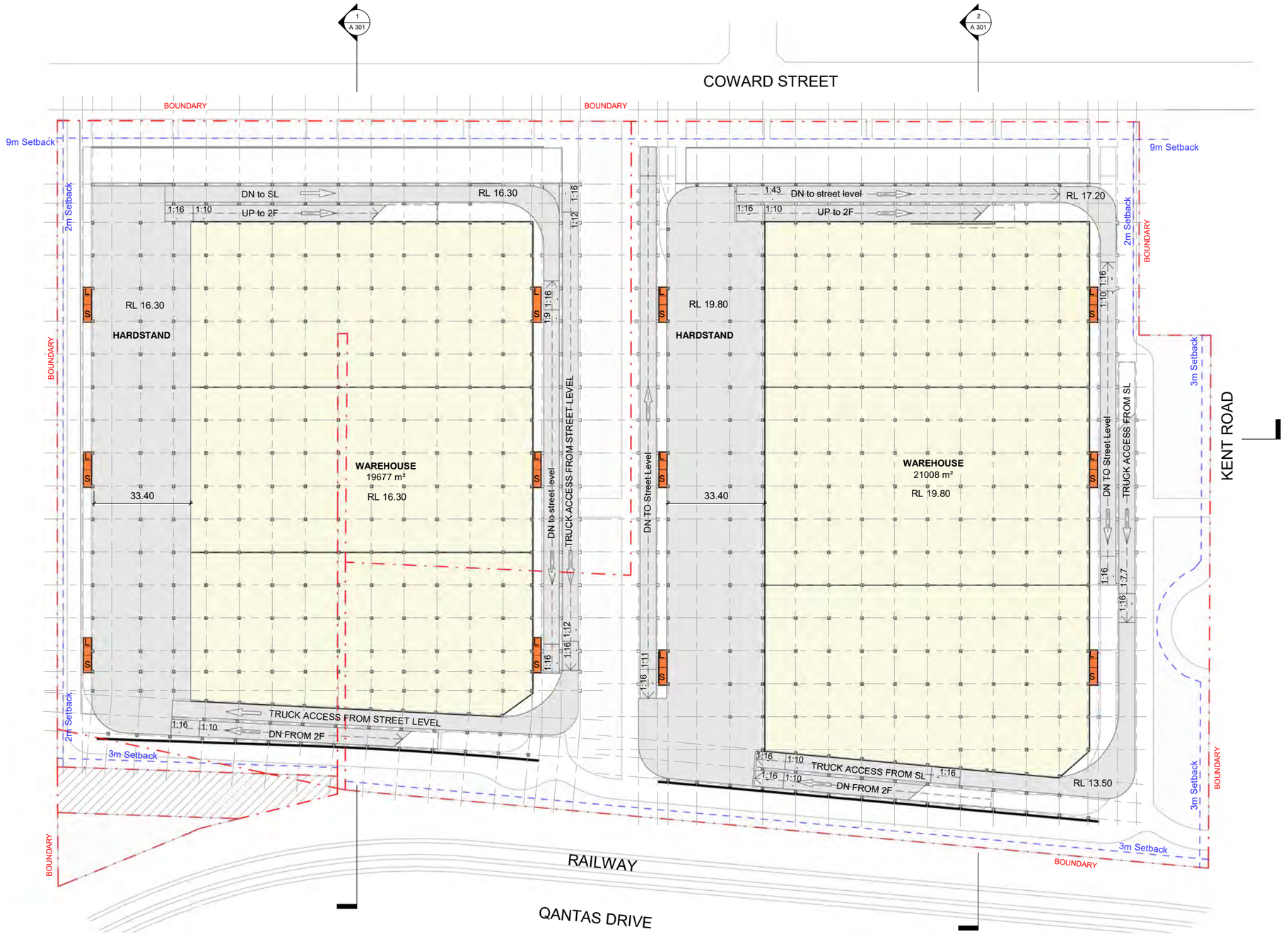
TITLE: **FSR 2:1**

Ground Floor- Office Mezz

DRAWING Nº.: **P-A 115**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:01:31 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23
REVISION	E

PLANNING PROPOSAL



Legend

- CORE
- WAREHOUSE

SCALE BAR - 1:750 @ A1 (0, 7.5, 15, 22.5, 30, 37.5 m)

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LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

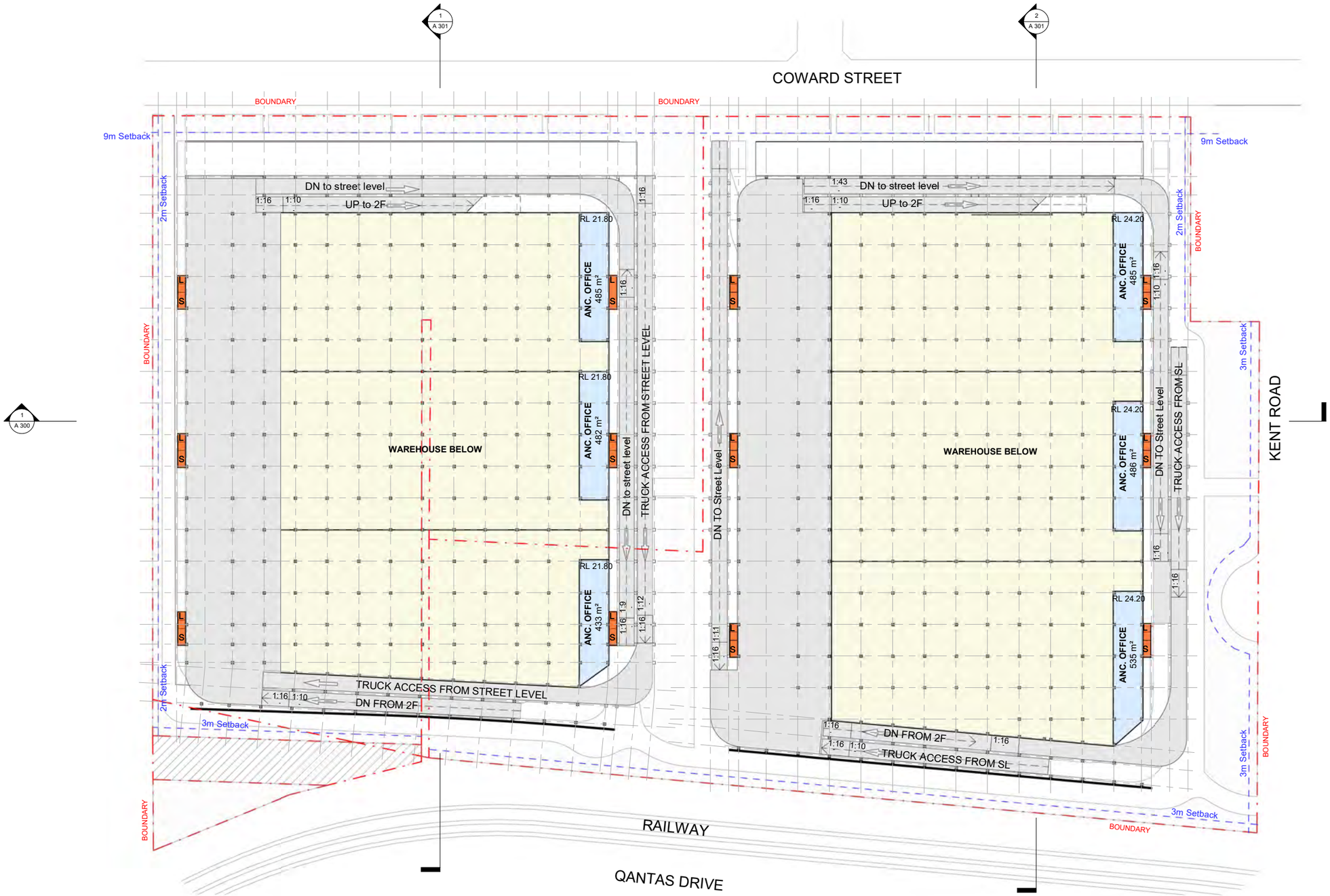
First Floor Plan

DRAWING N°.: **P-A 120**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:36 PM
PROJECT N°.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: E

PLANNING PROPOSAL



Legend

- ANC. OFFICE
- CORE
- WAREHOUSE BELOW

SCALE BAR - 1:750 @ A1 (0, 7.5, 15, 22.5, 30, 37.5 m)

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KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
N SHOP= NEIGHBOURHOOD SHOP
A.O= ANCILLARY OFFICE
LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

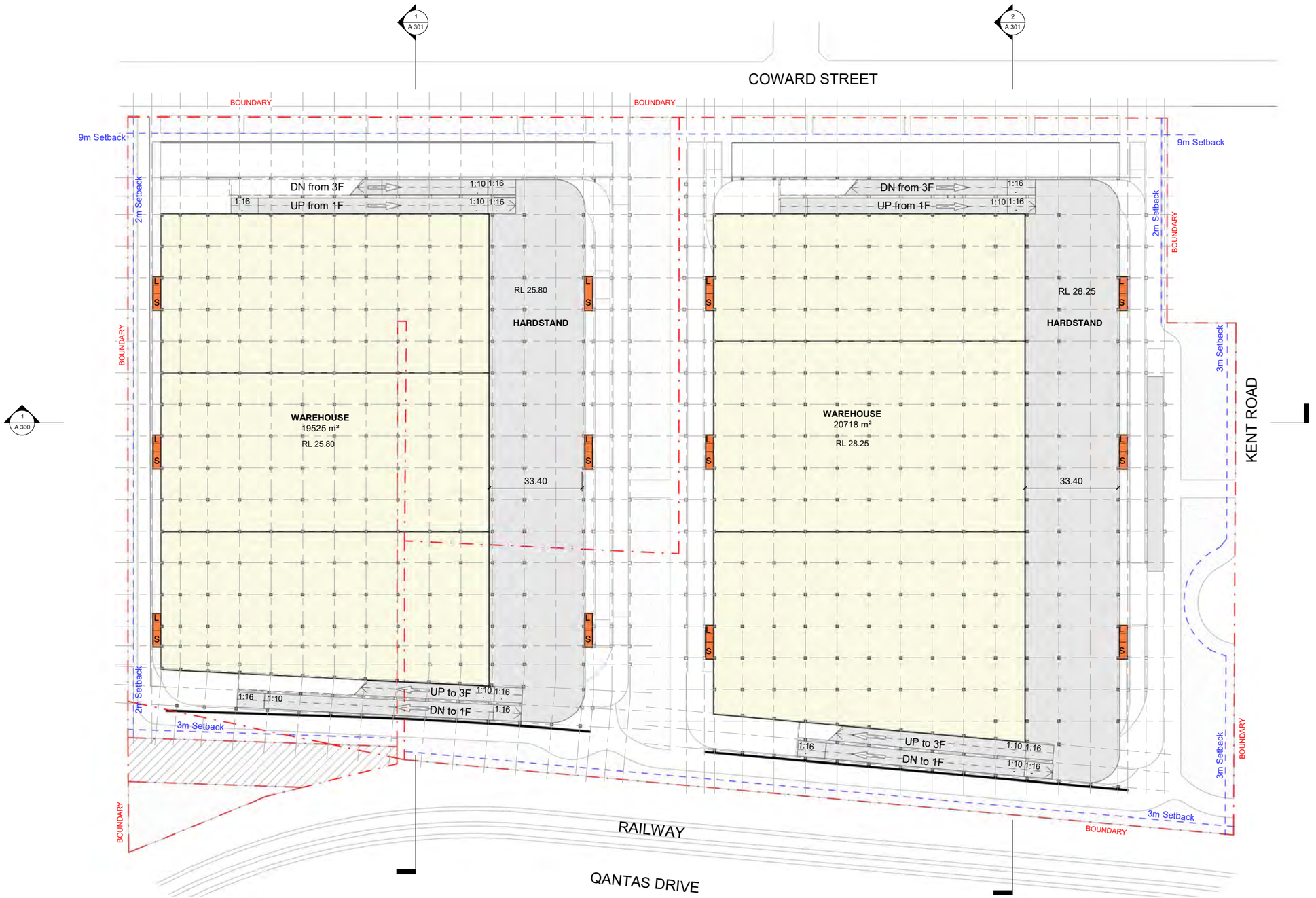
First Floor Mezzanine Plan

DRAWING Nº.: **P-A 125**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:41 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: **E**

PLANNING PROPOSAL



1
A 300

Legend

- CORE
- WAREHOUSE

0 7.5 15 22.5 30 37.5
SCALE BAR - 1:750 @ A1 m

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David Stevenson NSW 6317

Rev	Description	Date
A	PRELIMINARY PLANNING PROPOSAL	13/03/23
B	PRELIMINARY PLANNING PROPOSAL	21/03/23
C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
N SHOP= NEIGHBOURHOOD SHOP
A.O= ANCILLARY OFFICE
LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

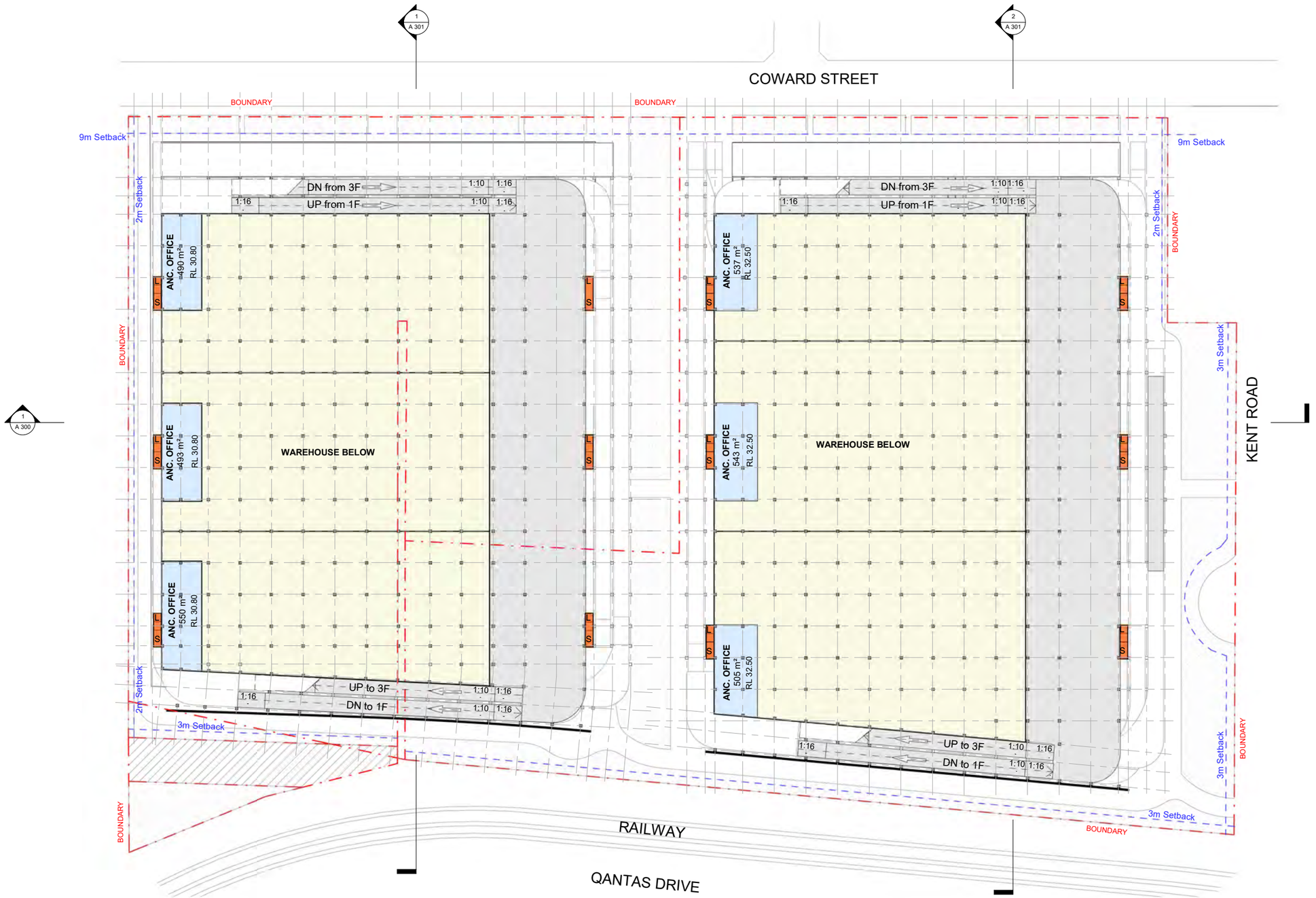
Second Floor Plan

DRAWING N°.: **P-A 130**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:46 PM
PROJECT N°.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: E

PLANNING PROPOSAL



Legend

- ANC. OFFICE
- CORE
- WAREHOUSE BELOW

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C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

KEY

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SETBACKS
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A.O= ANCILLARY OFFICE
LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

Second Floor Mezzanine Plan

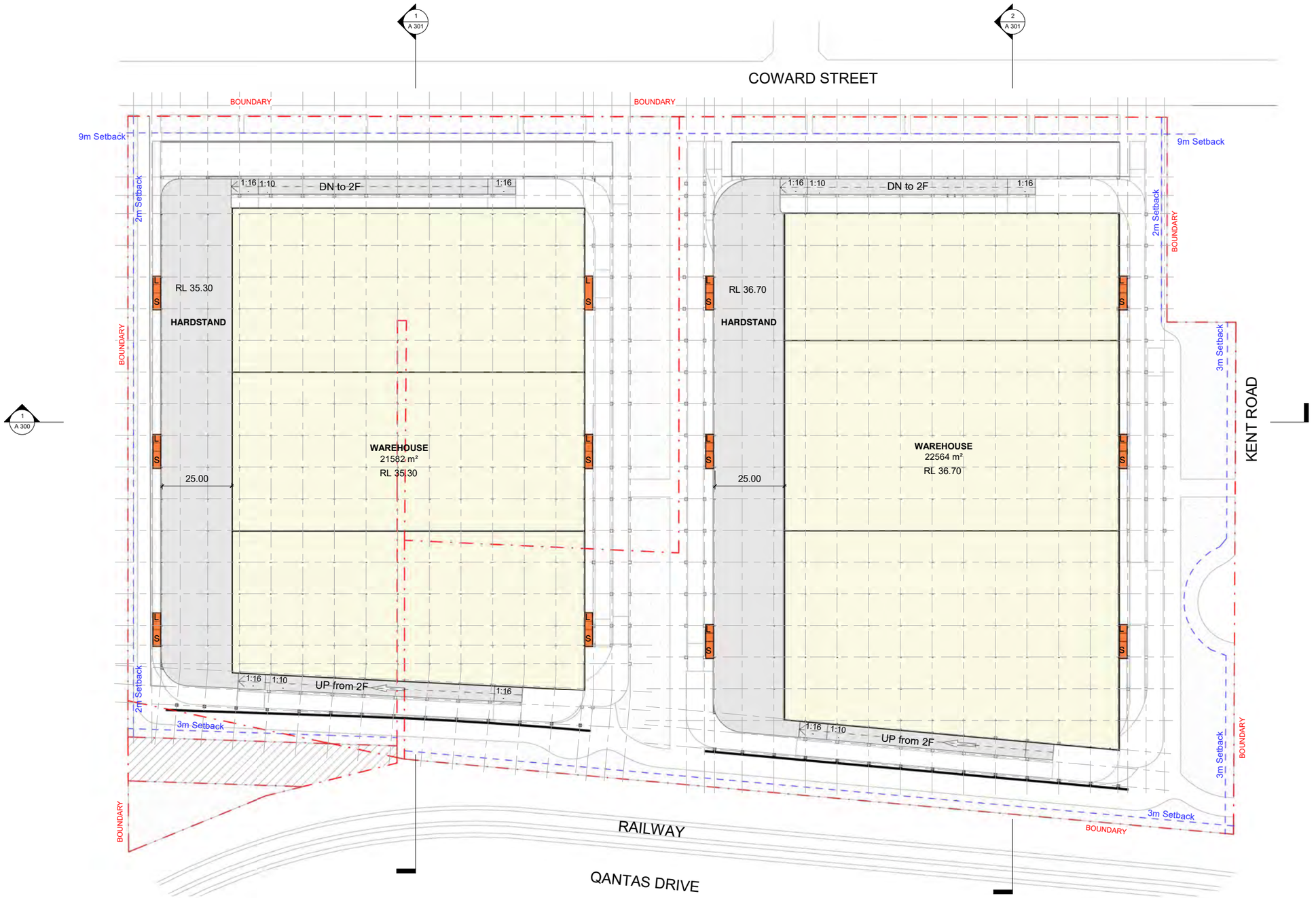
DRAWING Nº.: **P-A 135**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:52 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: E

PLANNING PROPOSAL

SCALE BAR - 1:750 @ A1
0 7.5 15 22.5 30 37.5 m



Legend

- CORE
- WAREHOUSE

0 7.5 15 22.5 30 37.5 m

SCALE BAR - 1:750 @ A1

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C	PRELIMINARY PLANNING PROPOSAL	28/04/23
D	PRELIMINARY PLA	05/05/23

KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
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LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

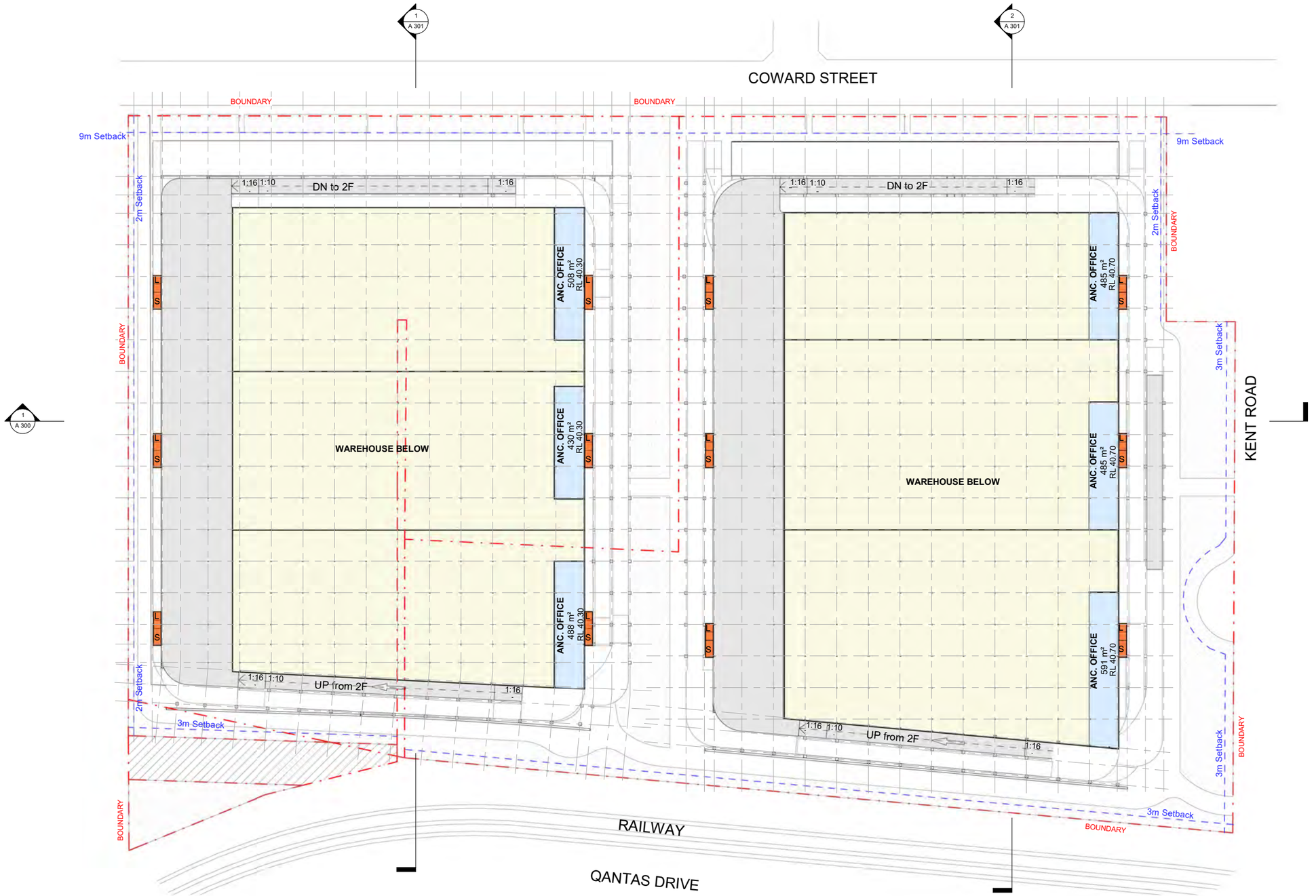
Third Floor Plan

DRAWING Nº.: **P-A 140**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:01:56 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: D

PLANNING PROPOSAL



Legend

- ANC. OFFICE
- CORE
- WAREHOUSE BELOW

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B	PRELIMINARY PLANNING PROPOSAL	21/03/23
C	PRELIMINARY PLANNING PROPOSAL	28/04/23
D	PRELIMINARY PLA	05/05/23

KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
N SHOP= NEIGHBOURHOOD SHOP
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LB= LOBBY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson
urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

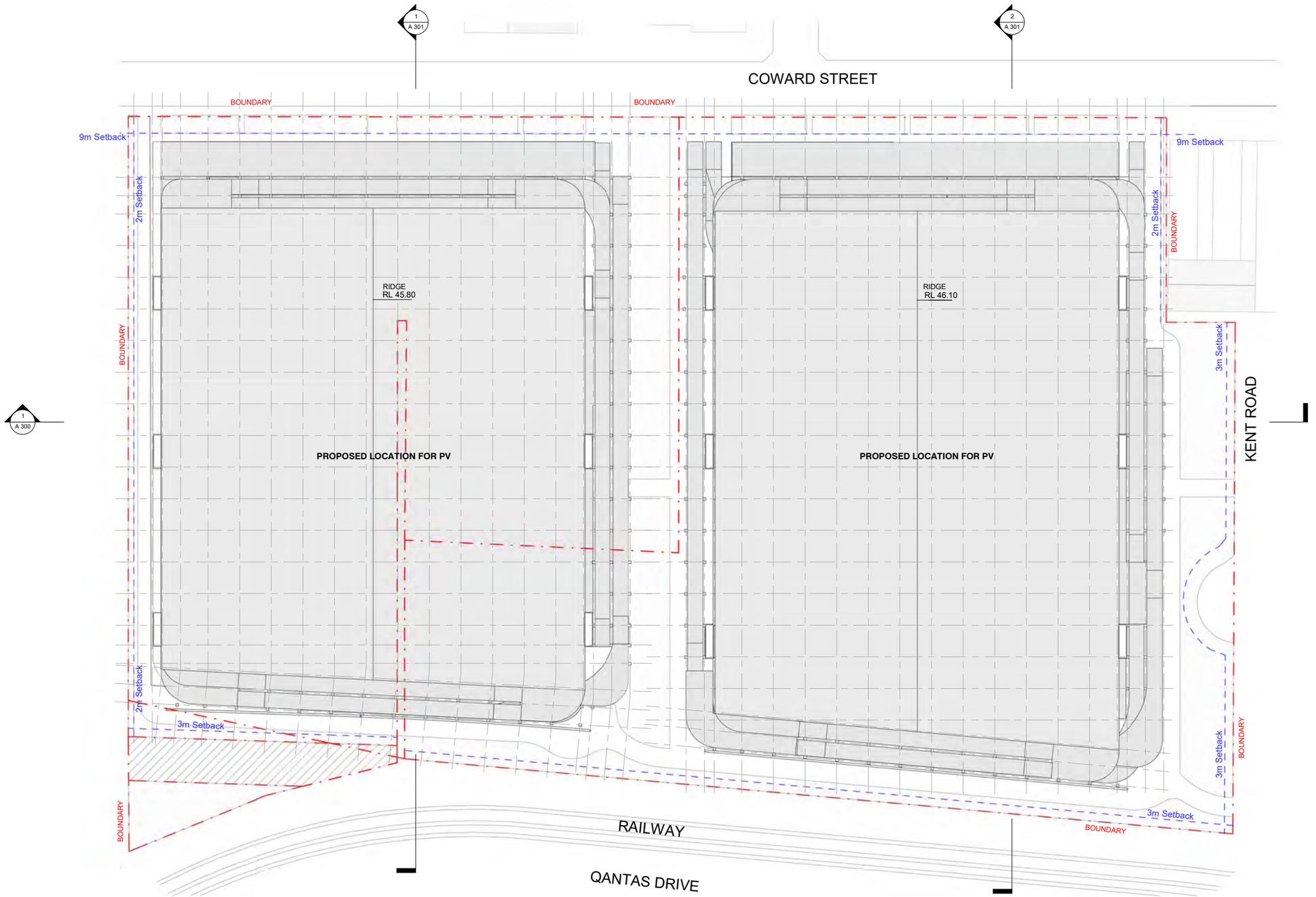
TITLE: **FSR 2:1**
Third Floor Mezzanine Plan

DRAWING N°.: **P-A 145**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:02:03 PM
PROJECT N°.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23
REVISION	D

PLANNING PROPOSAL

0 7.5 15 22.5 30 37.5
SCALE BAR - 1:750 @ A1 m



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NOMINATED ARCHITECTS:
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Rev	Description	Date
A	PRELIMINARY PLANNING PROPOSAL	28/04/23
B	PRELIMINARY PLA	05/05/23

KEY

BOUNDARY
SETBACKS
OWNED BY OTHERS

L= LIFTS
S= STAIRS
N SHOP= NEIGHBOURHOOD SHOP
A.O= ANCILLARY OFFICE
LB= LOBBY

0 7.5 15 22.5 30 37.5
SCALE BAR - 1:750 @ A1 m

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

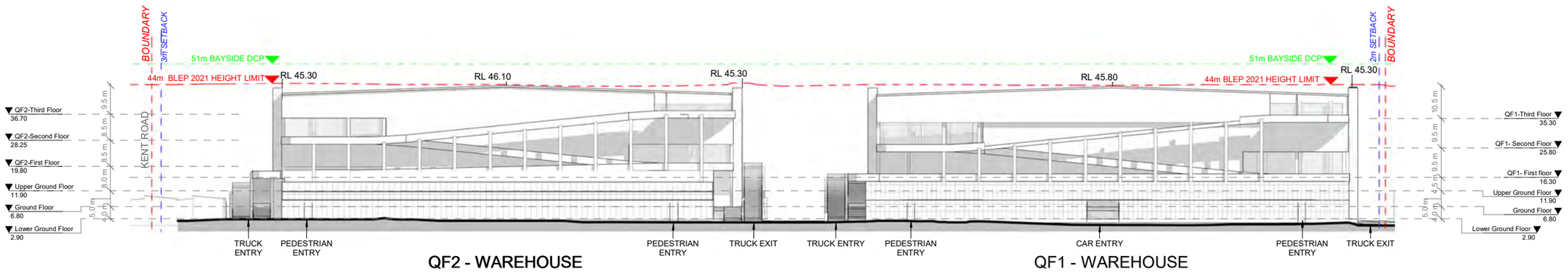
Roof Plan

DRAWING Nº.: **P-A 150**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:14:43 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: **B**

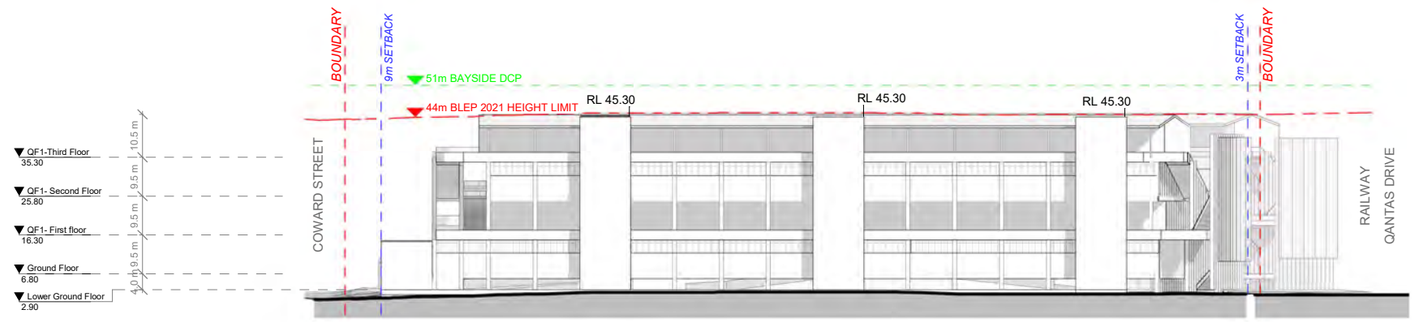
PLANNING PROPOSAL



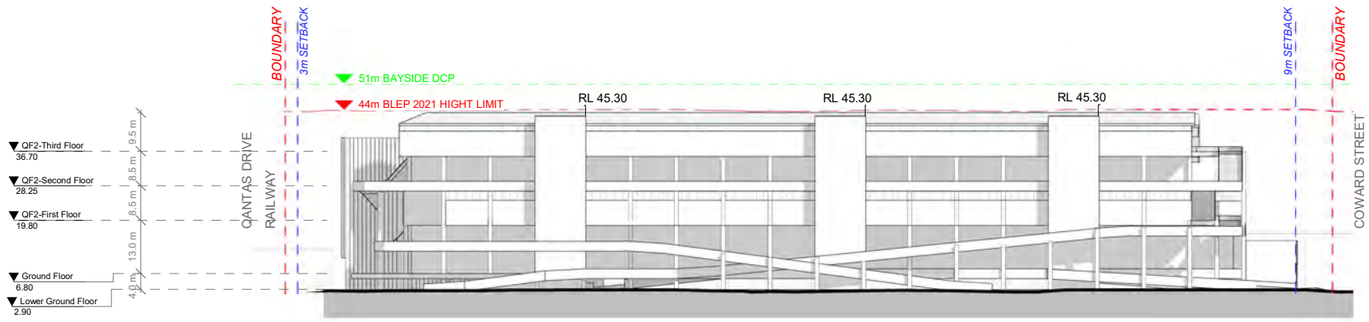
1 North Elevation
1 : 750



2 South Elevation
1 : 750



4 West Elevation_QF1
1 : 750



3 East Elevation_QF2
1 : 750

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Rev	Description	Date
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B	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

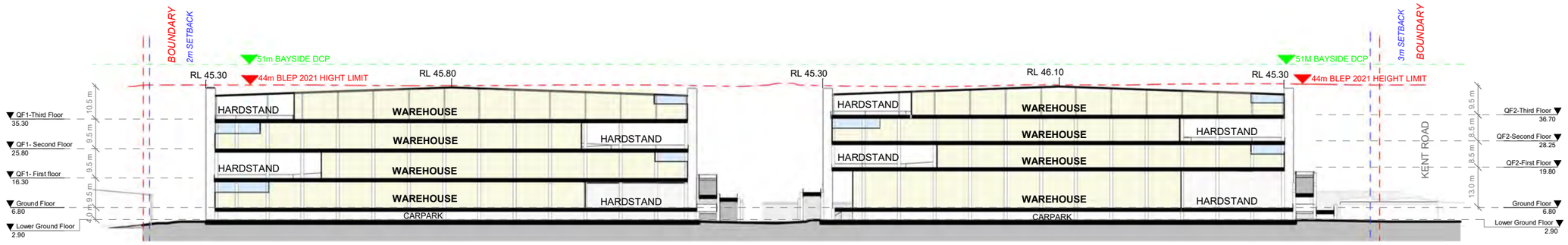
TITLE: **FSR 2:1**
Elevations

DRAWING Nº.: **A 200**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:02:32 PM
PROJECT Nº.	2206
SCALE	1 : 750 @ A1
REVISION DATE	05/05/23

REVISION: B

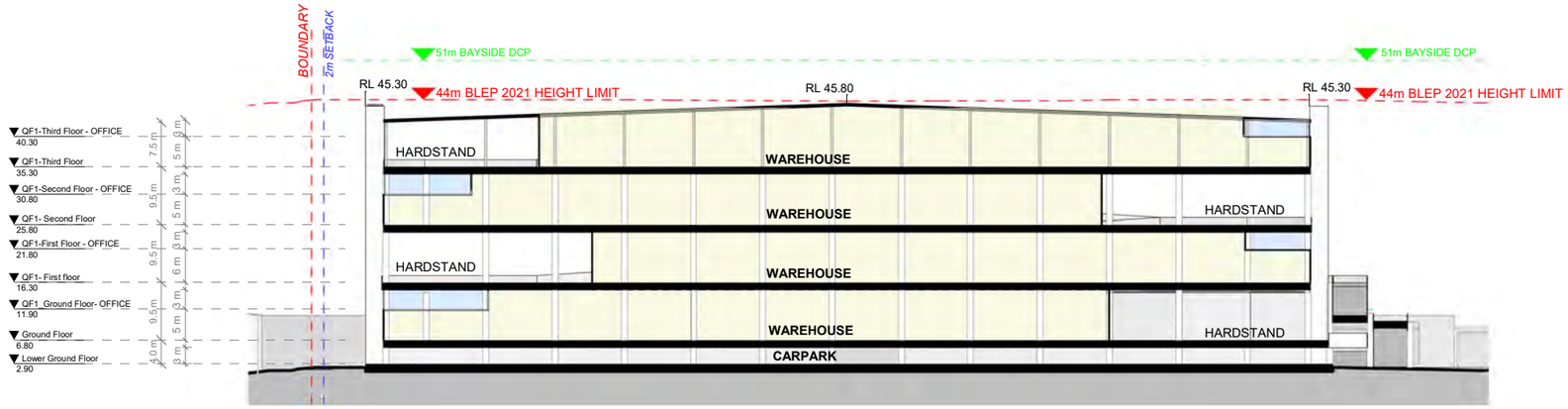
PRELIMINARY



QF1 - WAREHOUSE

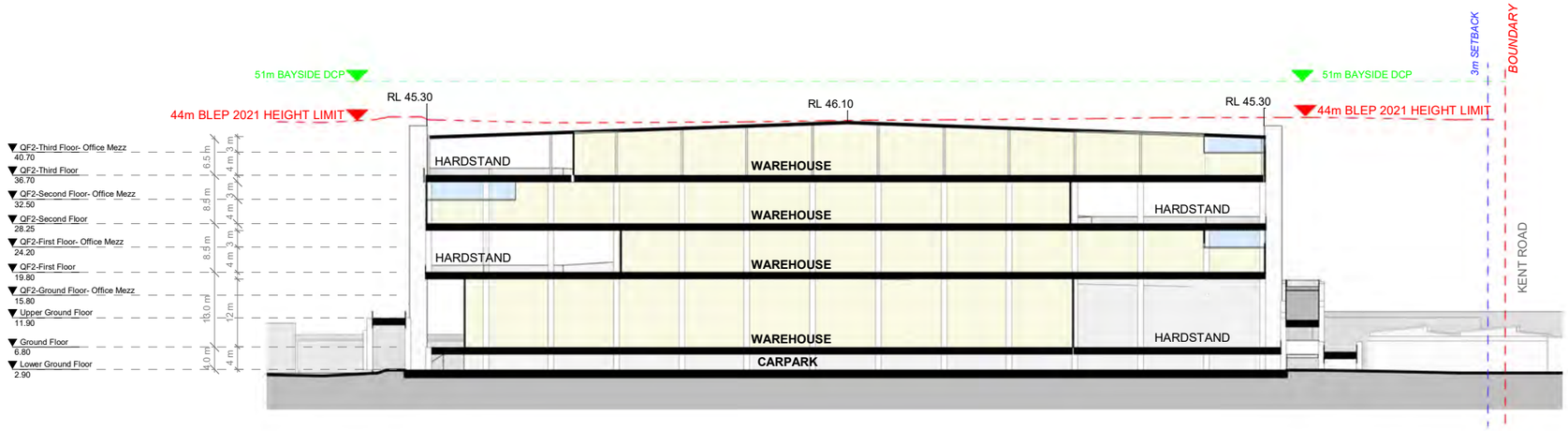
QF2 - WAREHOUSE

1 Section 1_ QF1&2
1 : 750



QF1 - WAREHOUSE

4 Section QF 1
1 : 500



QF2 - WAREHOUSE

2 Section QF 2
1 : 500

Legend

- ANC. OFFICE
- WAREHOUSE
- WAREHOUSE BELOW

0 7.5 15 22.5 30 37.5 m
SCALE BAR - 1:750 @ A1

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C	PRELIMINARY PLANNING PROPOSAL	19/04/23
D	PRELIMINARY PLANNING PROPOSAL	28/04/23
E	PRELIMINARY PLA	05/05/23

KEY
OLS HEIGHT LIMIT
COUNCIL HEIGHT LIMIT
SETBACKS
BOUNDARY

LANDSCAPE ARCHITECT
Paddock

ARCHITECT
Lacoste + Stevenson
urban design - architecture - interiors

CLIENT
LOGOS

PROJECT
QF1 - QF2 Warehouse

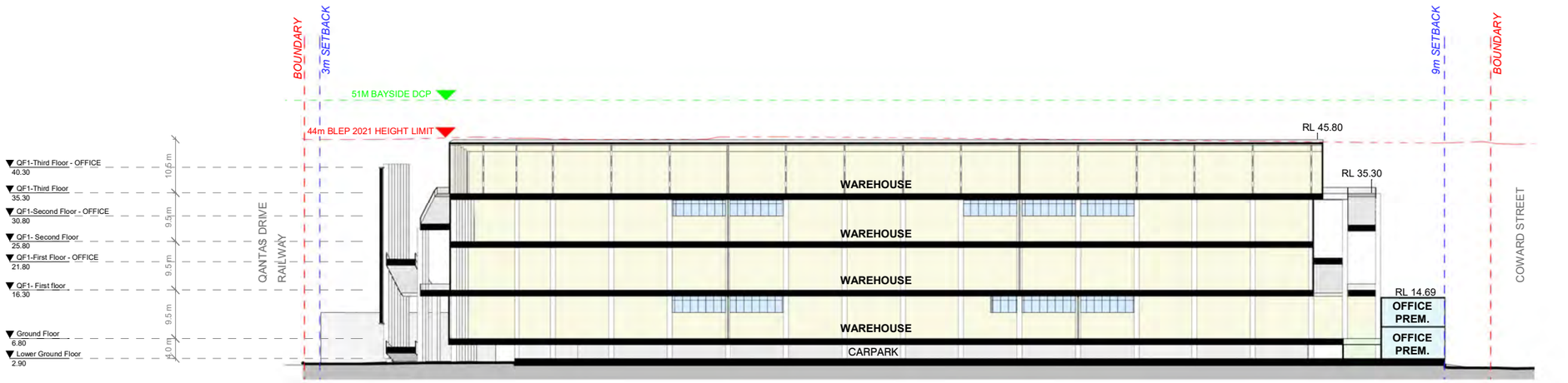
263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE
FSR 2:1
East-West Sections

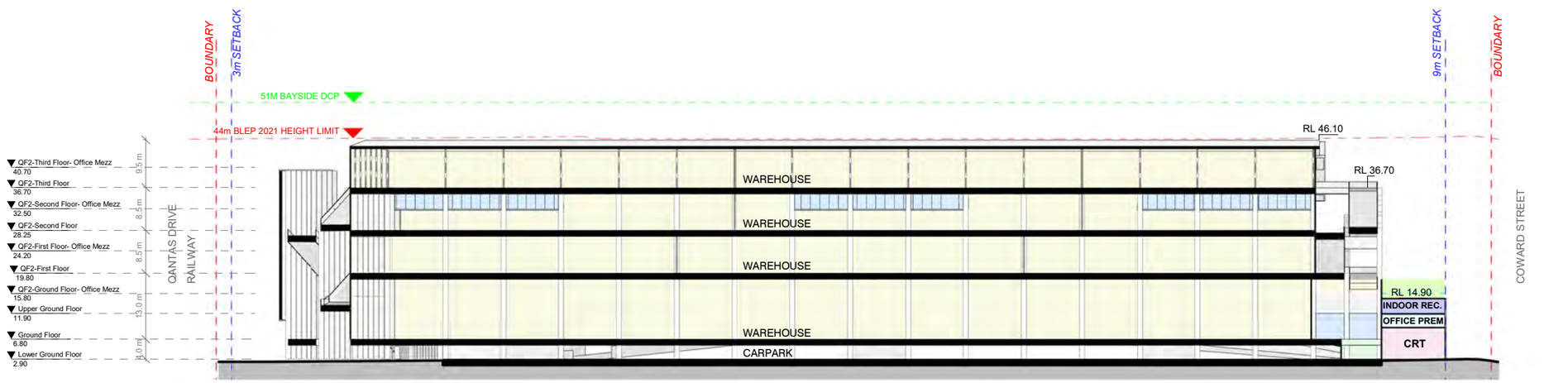
DRAWING Nº.
P-A 300

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:02:44 PM
PROJECT Nº.	2206
SCALE	As indicate@ A1
REVISION DATE	05/05/23

REVISION
E



1 North-South Section QF1
1 : 500



2 North-South Section QF2
1 : 500

Legend

- ANC. OFFICE
- CRT
- EoT
- INDOOR REC.
- OFFICE PREM.
- OUTDOOR RECREATION
- WAREHOUSE
- WAREHOUSE BELOW

0 7.5 15 22.5 30 37.5 m
SCALE BAR - 1:750 @ A1

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Rev	Description	Date
A	PRELIMINARY PLANNING PROPOSAL	28/04/23
B	PRELIMINARY PLA	05/05/23

KEY
OLS HEIGHT LIMIT
COUNCIL HEIGHT LIMIT
SETBACKS
BOUNDARY

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**
North-South Sections

DRAWING Nº.: **P-A 301**

DRAWN BY	TY
REVIEWED BY	TL
PLOT DATE	5/05/2023 5:03:01 PM
PROJECT Nº.	2206
SCALE	1 : 500 @ A1
REVISION DATE	05/05/23

REVISION: **B**



1 **Concept Scheme from South-West**

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B	PRELIMINARY PLANNING PROPOSAL	28/04/23
C	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

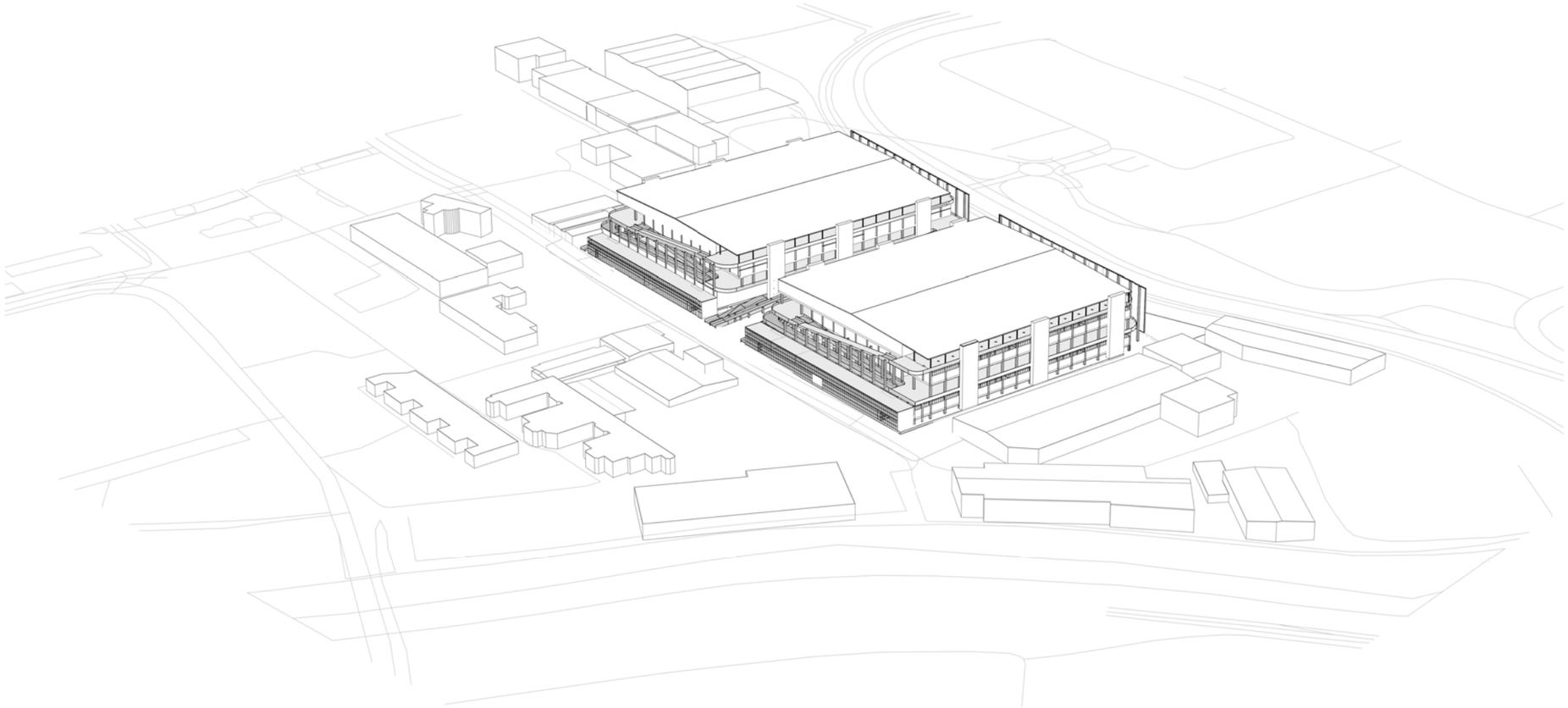
Perspective View 01

DRAWING Nº.: **P-A 410**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:03:06 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: **C**

PLANNING PROPOSAL



1 **Concept Scheme from North West**

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David Stevenson NSW 6317

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B	PRELIMINARY PLANNING PROPOSAL	28/04/23
C	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

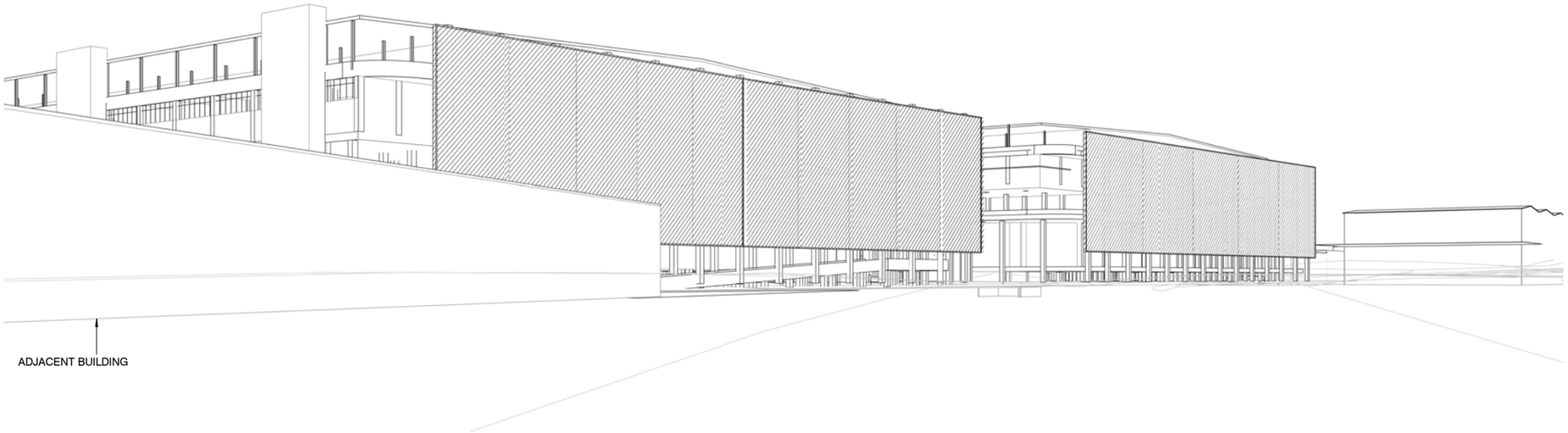
Perspective View 02

DRAWING Nº. **P-A 415**

DRAWN BY	Author
REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:03:11 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: **C**

PLANNING PROPOSAL



1 **Concept Scheme from Qantas Drive**

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B	PRELIMINARY PLANNING PROPOSAL	28/04/23
C	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

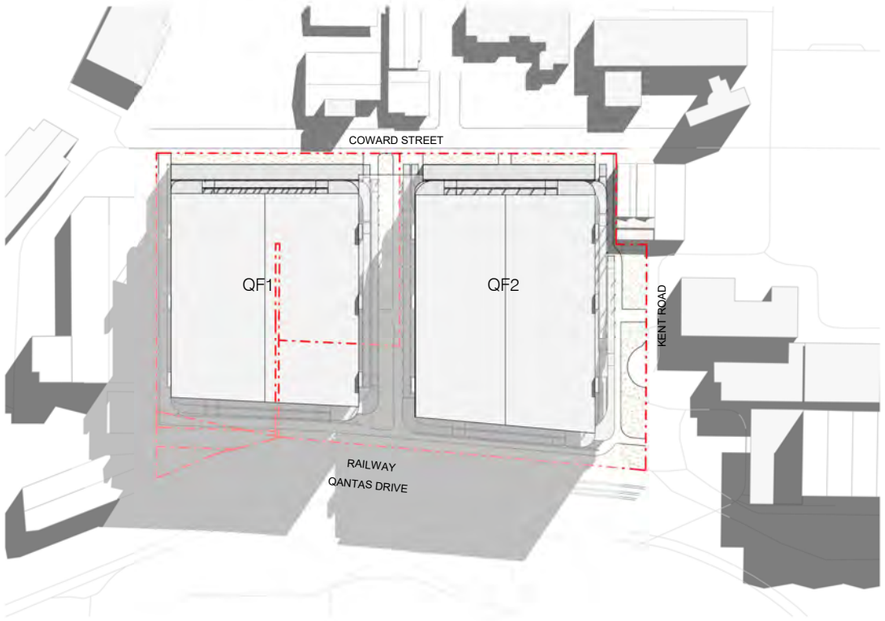
Perspective View 03

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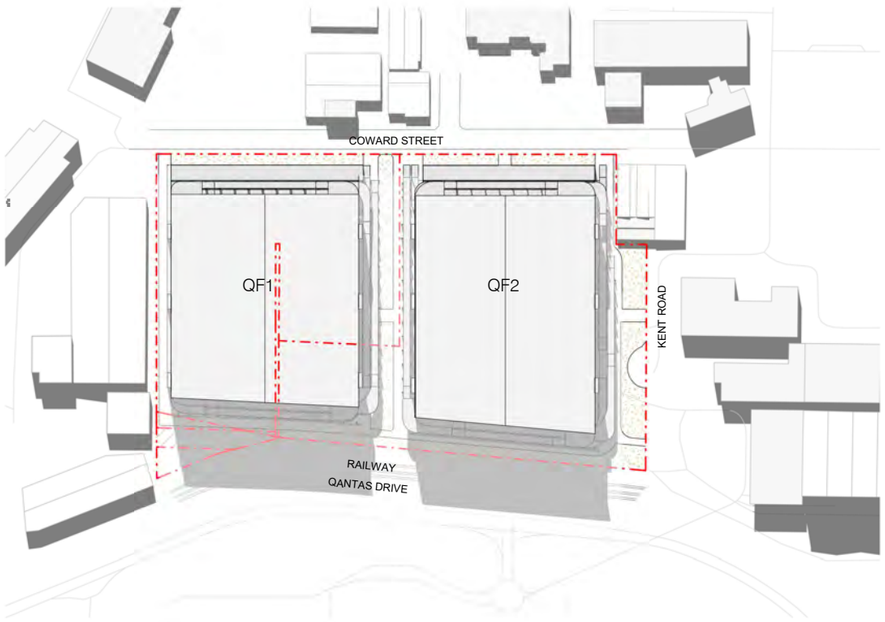
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REVIEWED BY	Checker
PLOT DATE	5/05/2023 5:03:15 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: C

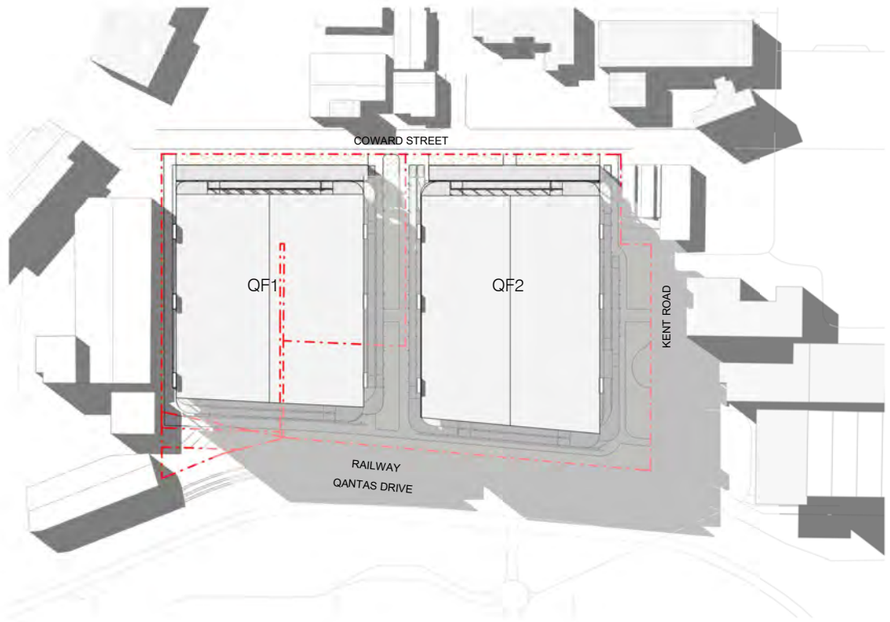
PLANNING PROPOSAL



21 JUNE _ 9:00 AM



21 JUNE _ 12:00 pm



21 JUNE _ 3:00 pm

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Figured dimensions take preference to scale readings. Verify all dimensions on site. Report any discrepancies to the Architect for decision before proceeding with the work.

NOMINATED ARCHITECTS:
David Stevenson NSW 6317

Rev	Description	Date
A	PRELIMINARY PLANNING PROPOSAL	28/04/23
B	PRELIMINARY PLA	05/05/23

LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson — urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse

263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**

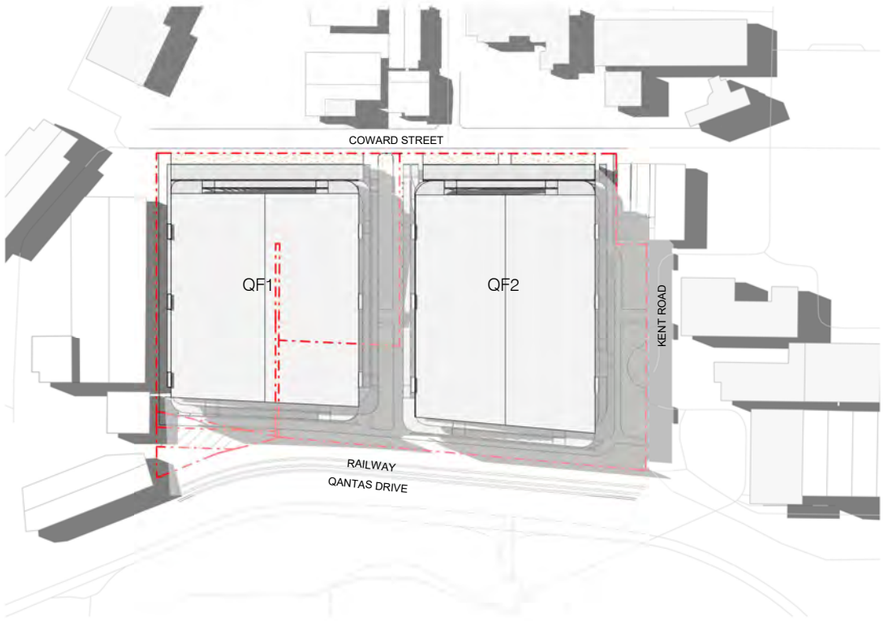
Shadow Diagram
21 June

DRAWING Nº.: **P-A 700**

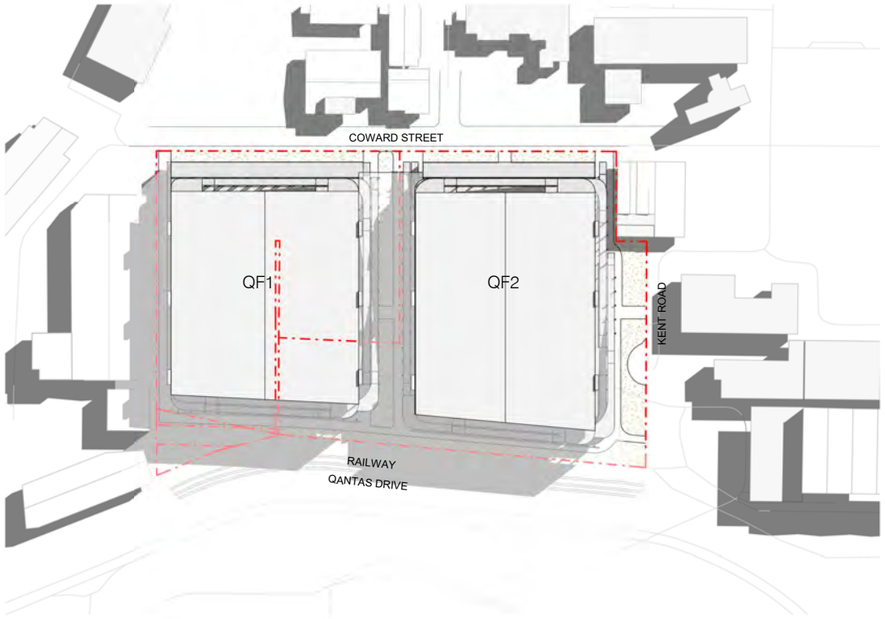
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SCALE	@ A1
REVISION DATE	

REVISION: **B**

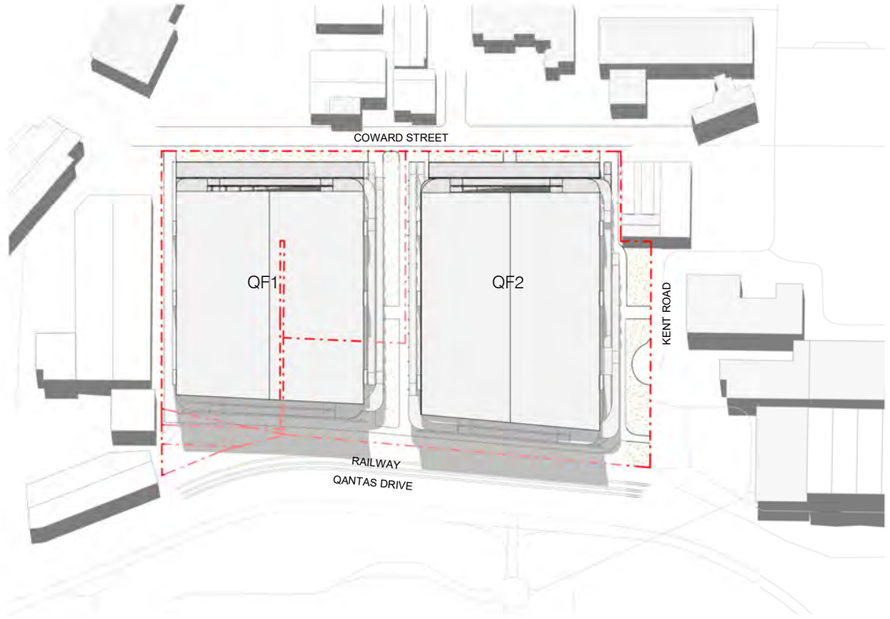
PLANNING PROPOSAL



21 MARCH _ 9:00 AM



21 MARCH _ 12:00 pm



21 MARCH _ 3:00 pm

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David Stevenson NSW 6317

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A	PRELIMINARY PLANNING PROPOSAL	28/04/23
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LANDSCAPE ARCHITECT: Paddock

ARCHITECT: Lacoste + Stevenson
urban design - architecture - interiors

CLIENT: LOGOS

PROJECT: QF1 - QF2 Warehouse
263-271 and 273A Coward Street and 76-82 Kent Road, Mascot

TITLE: **FSR 2:1**
Shadow Diagram
21 March

DRAWING Nº.: **P-A 710**

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PLOT DATE	5/05/2023 5:03:54 PM
PROJECT Nº.	2206
SCALE	@ A1
REVISION DATE	

REVISION: **B**

PLANNING PROPOSAL